



ALI-NVR3004P, ALI-NVR3008P

Embedded Network Video Recorder

User Manual

Products: ALI-NVR3004P, ALI-NVR3008P



ALI-NVR3000P Series Network Video Recorder

PLEASE READ THIS MANUAL BEFORE USING YOUR SYSTEM, and always follow the instructions for safety and proper use. Save this manual for future reference.



Do not expose this appliance to rain or moisture. Operate this device only in environments where the temperature or humidity is within the recommended range. Operation at extreme temperatures or in very high or low humidity levels may cause electric shock and shorten the life of the product.



FCC Caution: *To assure continued compliance, use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.*

NOTE

This equipment has been tested and found to comply with the limits for a Class "A" digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

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For Sales and Support, contact your distributor.

Regulatory information

FCC information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Safety Instructions

Read these instructions and keep them in a safe place for future reference.

- Please refer all work related to the installation of this product to qualified service personnel or system installers.
- Do not operate the appliance beyond its specified temperature, humidity or power source ratings.
- Place the unit on a flat surface not prone to vibration or impact.
- Use the appliance at temperatures between 14 °F ~ 131 °F (-10 °C ~ +55 °C) and relative humidity below 90%. The input power source for this appliance is between 90 ~ 264 Vac, 47 ~ 63 Hz.

-
- Install the unit away from heat sources such as radiators, heat registers and stoves.
 - Installation of the unit near consumer electronics devices, such as stereo receiver/amplifiers and televisions, is permitted as long as the air surrounding the terminal does not exceed the above mentioned temperature range.
 - Handle hard disk drives with care.
 - It is possible to damage hard drives if they are moved while their motors are still running. To allow the hard drive to spin down and park its heads, wait at least 10 seconds after disconnecting power before moving the unit.
 - To avoid shock and vibration damage to the internal hard drive, do not move the unit while it is plugged in.
 - Protect hard disk drives from static electricity.
 - Do not stack hard disk drives or keep them upright.
 - Do not use an electric or magnetic screwdriver to install hard disk drives.
 - Do not place the unit in an enclosed area where the cooling vents are blocked or impede the flow of air through the ventilation openings.
 - Protect the power cord from being stepped on or pinched particularly at plugs and the points where they exit from the apparatus.
 - Do not drop metallic parts through slots. This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.
 - Handle the appliance with care. Do not drop or shake, as this may damage the device.
 - Do not expose the appliance to water or moisture, nor try to operate it in wet areas. Do not install the unit in an area where condensation occurs. Do not operate with wet hands. Take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also cause electric shock.
 - Do not use strong or abrasive detergents when cleaning the surfaces of this product. When dirt is hard to remove, use a mild detergent and wipe gently.
 - Do not overload outlets and extension cords. Electric shock or fire may result.
 - Save your system configuration.
 - Distributing, copying, disassembling, reverse compiling, reverse engineering, and exporting, in violation of export laws, the software provided with this product is expressly prohibited.

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SECTION 1

Systems Overview

Congratulations on purchasing your new Embedded NVR security system! Your system includes the following key features:

General

- Each channel supports dual-stream video.
- Up to 8 network cameras with the ALI-NVR3008P, 4 network cameras with the ALI-NVR3004P.
- NVR supports cameras from several manufacturers. Refer to “APPENDIX D NVR Compatible Cameras” on page 126.
- Independent configuration for each channel including resolution, frame rate, bit rate, image quality, etc.
- The quality of the input and output record is configurable.

Local Monitoring

- Simultaneous HDMI and VGA monitor output with resolutions up to 1920 x 1080.
- Multiple screen display in live view is supported; the display sequence of channels is configurable.
- Configurable Live View display of groups and tours.
- Live view Quick setting menu.
- Motion detection, tamper-proof, video exception alert and video loss alert functions.
- Privacy mask.
- Zooming in by clicking the mouse and PTZ tracing by dragging mouse.

HDD Management

- Supports up to 2 internal SATA hard disk drives, with a maximum of 4TB storage capacity in each drive.
- 8 network disks (8 NAS disks, or 7 NAS disks+1 IP SAN disk) can be connected.
- Supports HDD S.M.A.R.T. and bad sector detection.
- Supports HDD group management.
- Supports HDD standby function.
- Supports HDD property: redundancy, read/write (R/W).
- Supports HDD quota management; a different capacity can be assigned to each camera channel.

Recording and Playback

- Holiday recording schedule configuration.
- Normal and event video encoding parameters.
- Multiple recording types: manual, normal or motion
- Eight recording time periods with separated recording types.
- Supports pre-record and post-record for motion detection recording, and pre-record time for schedule and manual recording.
- Tag marker insertions, search and playback by tags.
- Lock/unlocking video files.

- Searching and playing back record files by channel number, recording type, start time, end time, etc.
- Motion analysis for the selected area in the video.
- Zoom in/out during playback.
- Forward/reverse, fast/slow playback.
- Forward/reverse multi-channel playback.
- Supports pause, skip forward and skip backward during playback.
- Up to 8-channel synchronous playback at 4CIF real time (ALI-NVR3008P) or 4-channel synchronous playback (ALI-NVR3004P).

Backup

- Export video data to USB device.
- Export video clips during playback.
- Management and maintenance of backup devices.

Alarm and Exception

- Alarm of for video loss, motion detection, tampering, illegal login, IP confliction, network disconnected, abnormal record, HDD error, HDD full.

Other Local Functions

- Operable by mouse or remote control.
- Three-level user management; admin user can create accounts and define their operating permissions, including access to camera channel.
- Operation, alarm, exceptions and log recording and search.
- Clear audible of alarms.
- Export and import NVR configuration.

Network Functions

- Self-adaptive 10M/100M/1000M network interface with multi-address, load balance, network fault tolerance, etc.
- Eight independent PoE network interfaces provided for ALI-NVR3008P, four PoE network interfaces provided for ALI-NVR3004P.
- Supports TCP/IP, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, NFS, and iSCSI protocols.
- Supports TCP, UDP and RTP for unicast.
- Auto/manual port mapping by UPnP.
- Remote reverse playback through RTSP.
- Remote search, playback, download, locking and unlocking of the record files.
- Remote parameters setup; remote import/export of device parameters.
- Remote viewing of the device status, system logs and alarm status.
- Remote keyboard operation.

- Remote locking and unlocking of control panel and mouse.
- Remote HDD formatting and firmware upgrade.
- Remote system restart and shutdown.
- Alarm and exception information can be sent to the remote host.
- Remotely start/stop recording.
- Remote capture.
- Embedded web server.

1.1 NVR Controls, connectors and indicators

Your new security system is easy to use and easy to setup. This section includes the function and use of the components included with a NVR system. For installation instructions, refer to Section 2. Advanced control and configuration procedures are included in Sections 3 through 9.

NVR Front Panel

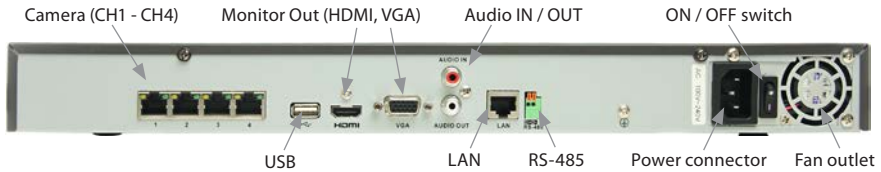


ALI-NVR3008P, ALI-NVR3004P front panel

Item	Usage
LED indicators	Power: The POWER indicator turns green when NVR is powered on.
	Status: 1. The light is green when the IR remote control is enabled 2. The light is red when the function of the composite keys (SHIFT) are used 3. The light is out when none of the above condition is met
	Tx/Rx: TX/RX indicator flickers green when the network connection is functioning normally.
Infrared Sensor	Sensor for the remote control.
USB port	This port can be used for a portable mobile HDD, flash drive, DVD burner, or mouse. An additional USB port is located on the back panel.

SECTION 1: SYSTEM OVERVIEW

NVR Backpanel



ALI-NVR3004P backpanel

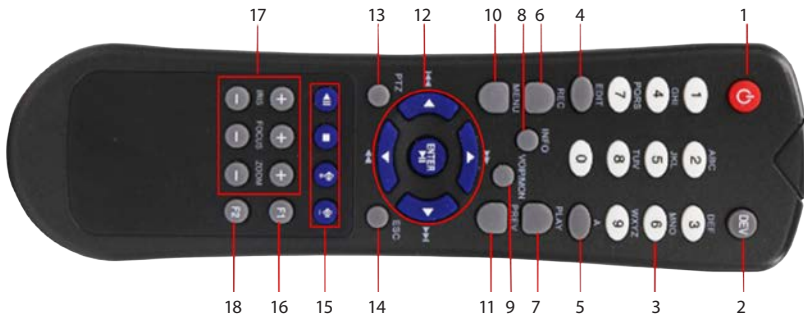


ALI-NVR3008P backpanel

Item	Description
Camera (CH1 - CH4)	Network interface for IP cameras solely dedicated to the NVR. These cameras can only be accessed through the NVR. Each port provides Power over Ethernet (PoE) power to the device connected to it. NOTE: Only the Observint line of 3S Vision cameras can be attached to these channels.
Monitor Out (HDMI, VGA)	HDMI and DB9 (VGA) connector for monitor.
AUDIO IN / OUT	Not functional. Included for future expansion.
ON / OFF switch	Switch for powering the NVR on and off
USB	This port can be used for a portable mobile HDD, flash drive, DVD burner, or mouse. An additional USB port is located on the front panel.
RS-485 terminations	Not functional. Included for future expansion.
Power connector	Connector for standard 3-prong power cable.

1.1.1 Remote control

The enter key on the remote control or the front panel has the same function as a mouse left click. The IR Range of the remote control is 10 meters. The buttons on the remote control correspond with the buttons on the front panel.



Item	Name	Function
1	POWER	Power on/off the device.
2	DEV	Enables/Disables Remote Control.
3	Alphanumeric Buttons	Use for entering numerical data
4	EDIT Button	Delete characters before cursor, check the checkbox and select the ON/OFF switch, start/stop record clipping in playback
5	A Button	Adjust focus in the PTZ Control menu, also used to switch between input methods (upper and lowercase alphabet, symbols and numeric input).
6	REC Button	Open the manual record interface
7	PLAY Button	Playback, for direct access to playback interface.
8	INFO Button	Reserved.
9	VOIP/MON button	Switch between main and spot output. In PTZ Control mode, it is used to zoom out the image.
10	MENU button	Press the button will help you return to the Main menu (after successful login). Press and hold the button for 5 seconds to turn off audible key beep. In PTZ Control mode, the MENU/WIPER button will start wiper (if applicable).
11	PREV button	Switch between single screen and multi-screen mode. In PTZ Control mode, it is used to adjust the focus in conjunction with the A/FOCUS+ button.
12	DIRECTION/ENTER buttons	DIRECTION: These buttons are used to navigate between different fields and items in menus. In the Playback mode, the Up and Down buttons are used to speed up and slow down recorded video. The Left and Right button select the next and previous record files. In Live View mode, these buttons can be used to cycle through channels. In PTZ control mode, they can control the movement of the PTZ camera. ENTER: The ENTER button is used to confirm selection in any of the menu modes. It can also be used to tick checkbox fields. In Playback mode, it can be used to play or pause the video. In single-frame Playback mode, pressing the button will advance the video by a single frame. In Auto-switch mode, it can be used to stop /start auto switch.
13	PTZ button	Enter the PTZ Control mode (if applicable). In the PTZ Control mode, it is used to adjust the iris of the PTZ camera.
14	ESC button	Return to the previous menu. Press for Arming/disarming the device in Live View mode.
15	RESERVED	Reserved for future usage.
16	F1 button	Select all items on the list when used in a list field. In PTZ Control mode, it will turn on/off PTZ light (if applicable). In Playback mode, it is used to switch between play and reverse play.
17	PTZ Control buttons	Buttons to adjust the iris, focus and zoom of a PTZ camera.
18	F2 button	Cycle through tab pages. In synchronous playback mode, use to switch between channels.

1.1.2 Mouse control

A standard 3-button (left/right/scroll-wheel) USB mouse can also be used with this NVR. To use a USB mouse:

1. Plug USB mouse into the either the front panel or backpanel USB connector of the NVR.
2. The mouse will be automatically detected. If the mouse is not detected, the mouse may not be compatible with the NVR. Please refer to the recommended device list from your provider.

The operation of the mouse:

Action	Effect
Right click	Live view: Show menu. Menu: Exit current menu to upper level menu.
Left click	Single click: Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double click: Live view: Switch between single-screen and multi-screen.
	Click and drag: PTZ control: pan, tilt and zoom. Tamper-proof, privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar
Scroll wheel	Scroll up: Live view: Previous screen. Menu: Previous item.
	Scroll down: Live view: Next screen. Menu: Next item.

1.1.3 Soft keyboard

An on-screen QWERTY keyboard appears when you click in a field that accepts a text entry, such as a password or name. The keyboard is shown in the following picture. Some control keys toggle their function when they are clicked.



Soft keyboard

SECTION 2

Installing the System

2.1 Getting Started: Unpacking the Equipment

What's in the box

Your system includes:

- NVR (ALI-NVR3004P or ALI-NVR3008P)
- Remote Control
- USB mouse
- 6 foot Ethernet cable
- 6 foot HDMI cable
- Power cable for NVR
- Interface cables for a 2nd internal hard disk drive

Remove the equipment from its packaging and place it on a flat, clean surface. Inspect each item. If any visible damage is present, contact your supplier for a replacement. Verify that your order is complete.

What you need

Although each security system installation is different, most require the following items not included with your system components:

- VGA or HDMI compatible computer monitor
- IP cameras and cables compatible with the NVR
- Tools to install the cameras and route power and video cables
- Fasteners to attach the cameras to the mounting surfaces
- A display device to connect to the NVR. The NVR will connect directly to a VGA video monitor or an HDMI monitor (HDMI cable is provided). The display device is usually needed only for system setup. It can be disconnected when the NVR is networked for access across a LAN or Internet.
- Uninterruptible power supply (UPS). This device is used to ensure system stability during voltage surges, sags, and outages. If a UPS is not available, a power strip with strong surge protection is highly recommended.

2.2 NVR installation general guidelines

2.2.1 Installing an HDD in the NVR

If you purchased your NVR without an internal HDD, you must install one for the NVR to function properly. Follow the procedure in “APPENDIX C HDD Installation” on page 122. If your HDD has an HDD, skip this procedure and continue installing the system with step “2.2.2 NVR Placement” on page 8.

2.2.2 NVR Placement

Your monitoring and recording equipment is the core device for constant surveillance and the reliable capture of video evidence. Observint Technologies strongly suggest that it be installed in a secure location with access limited to authorized personnel.

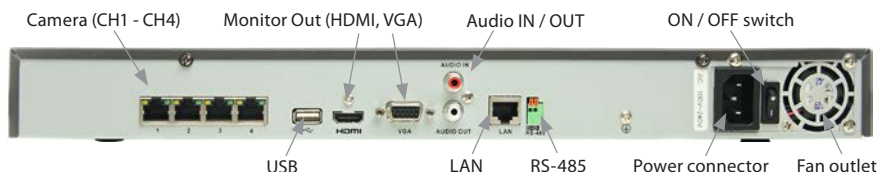
NVRs and monitors generate heat and should be placed in a clean and well ventilated area. A high temperature environment will reduce the life span and reliability of the equipment. Additionally, the NVR is not weatherproof, so avoid exposure to liquids and excessive dust. Do not place objects along the sides or behind the NVR that will block airflow through the unit.

Uninterruptible power supplies

It is strongly suggested that power to the system be routed through an uninterruptible power supply (UPS). These devices will keep your security system running through most power outages, in addition to providing excellent surge and sag protection. The UPS should support the NVR and all cameras to ensure normal operation during abnormal power conditions.

Proximity to other cameras and the local LAN

Your NVR connects to other devices through Ethernet networks. The ALI-NVR3004P and ALI-NVR3008P each include two network interfaces: one to a local area network (LAN) through the LAN connector on the back panel, and the other directly to IP cameras plugged into the Camera CH1 - CH4 connectors shown on the ALI-NVR3004P below, or Camera CH1 - CH8 connectors on an ALI-NVR3008P.



The IP cameras you monitor with your NVR can be connected to either the Ethernet connectors on the back panel or the local LAN. However, the number of cameras the NVR monitors on the LAN plus the number of those it monitors through the camera channel connectors on the back panel cannot exceed the channel capacity of your NVR.

If you are using Cat 5e or Cat 6 copper (Ethernet) cable to connect your cameras to the NVR, or other cameras to the LAN, the cable distance from the NVR (or switch on the LAN) should not exceed 330 feet (100 meters). If a longer cable run is required, the use of an active hardware device such as a repeater or switch is necessary.

2.3 Install the NVR and monitor

For the following steps, refer to the back panel photo above for the location of connectors.

1. Place the NVR in a location that is secure, well ventilated and clean. The NVR should be positioned such that the back panel connectors are accessible and the ventilation holes on the sides and top and the fan outlet on the back are not blocked.
2. Install and setup your monitor in accordance with the instructions provided with the monitor. Do not power it on at this time.
3. Cable the HDMI or VGA connector to your monitor's VGA or HDMI input. The HDMI interface provides the best performance.
4. Plug the mouse into the USB connector on the front or back of the NVR.
5. If you plan to access your NVR remotely, or configure your NVR to transmit alerts, email, etc. to external servers, plug a drop cable from your local area network (LAN) into the RJ45 LAN connector on the back of the NVR.
6. Connect the power cord to the power connector on the back panel of the NVR, and then into a UPS (preferred) or surge protector.

NOTE Do not power on the NVR at this time.

2.4 Connecting it together – initial system setup

1. Plug the LAN cables from the cameras into a connector in the group of RJ45 Ethernet ports on the back of the NVR.

If other cameras to be monitored by the NVR will network to it through the LAN, plug their Ethernet cables into a switch (router) on the LAN and power on those cameras. (Power to other cameras on the LAN may be provided through a PoE switch if the camera is PoE capable, or through a separate cable and power adapter).

2. Power on the NVR using the power on / off (I / O) switch on the back panel.
3. Power on the monitor.

NOTE Some monitors have multiple inputs such including VGA, HDMI, BNC, etc. If you are using this kind of monitor, configure your monitor to display the input connected to your NVR (HDMI or VGA).

2.4.1 Using the Wizard for basic configuration setup

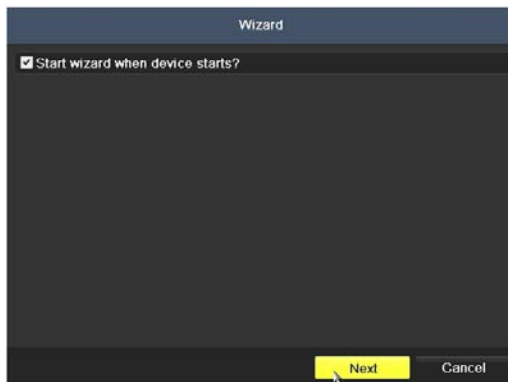
1. Power on the NVR. Normally, an Alibi logo splash screen appears within 2 minutes.



2. The Setup Wizard can assist you in making important configuration settings in DVR. Click **Next** button on the Wizard window to open the **Login** window.

NOTE

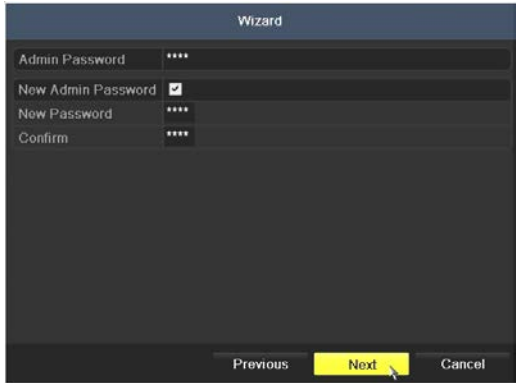
*The configuration settings presented in the setup Wizard can also be made and changed using the **Menu** system. See Chapters 5 - 7 for more information.*



- Enter the admin password in the appropriate field. To do that, click inside the **Admin Password** field to open the virtual keyboard. Click the appropriate icons to enter the password, then click the **Enter** icon. The default **admin** password is **1111**.

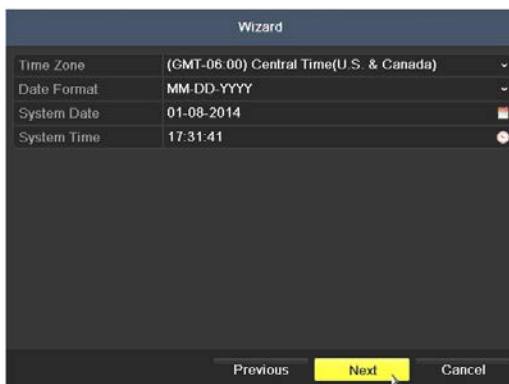


Observint strongly recommends that you change the default admin user password to improve the security of your surveillance system. To change the admin password, check the **New Admin Password** box, then enter the new password in the **New Password** and **Confirm** fields.



- Click the **Next** button to open the date and time settings window.

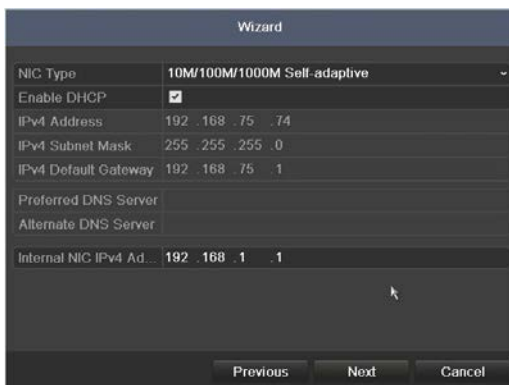
SECTION 2: INSTALLING THE SYSTEM



The screenshot shows a 'Wizard' window with a dark blue header. Below the header is a table with four rows: 'Time Zone' set to '(GMT-06:00) Central Time(U.S. & Canada)', 'Date Format' set to 'MM-DD-YYYY', 'System Date' set to '01-08-2014', and 'System Time' set to '17:31:41'. Each row has a small icon to its right. At the bottom of the window are three buttons: 'Previous', 'Next' (highlighted in yellow), and 'Cancel'.

Wizard	
Time Zone	(GMT-06:00) Central Time(U.S. & Canada)
Date Format	MM-DD-YYYY
System Date	01-08-2014
System Time	17:31:41

5. In the date and time setup window, click the field you want to change, then use the drop-down list or setup aid to select the appropriate values. Click **Next** to confirm your settings or **Cancel** to discard them and open the network setup Wizard window.
6. In the **Network** setup Wizard window, click the field value you want to change, then use the pop-up aid to enter a new value. By default, the DVR uses DHCP (Dynamic Host Configuration Processor) to acquire compatible (dynamic, changeable) network settings from a network DHCP server.



The screenshot shows a 'Wizard' window with a dark blue header. Below the header is a table with several rows: 'NIC Type' set to '10M/100M/1000M Self-adaptive', 'Enable DHCP' with a checked checkbox, 'IPv4 Address' set to '192 . 168 . 75 . 74', 'IPv4 Subnet Mask' set to '255 . 255 . 255 . 0', 'IPv4 Default Gateway' set to '192 . 168 . 75 . 1', 'Preferred DNS Server' (empty), 'Alternate DNS Server' (empty), and 'Internal NIC IPv4 Ad...' set to '192 . 168 . 1 . 1'. At the bottom of the window are three buttons: 'Previous', 'Next' (highlighted in yellow), and 'Cancel'.

Wizard	
NIC Type	10M/100M/1000M Self-adaptive
Enable DHCP	☒
IPv4 Address	192 . 168 . 75 . 74
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	192 . 168 . 75 . 1
Preferred DNS Server	
Alternate DNS Server	
Internal NIC IPv4 Ad...	192 . 168 . 1 . 1

Generally, it is preferable to setup the DVR with a fixed network settings, if possible, to assure the DVR has an unchanging IP address for remote logins. To enable fixed network settings, uncheck the **Enable DHCP** box, then edit the appropriate fields to change the settings. Consult with your network administrator to determine the best network settings for your DVR. When finished, click **Next**.

The screenshot shows a 'Wizard' window for network configuration. It contains the following fields and values:

NIC Type	10M/100M/1000M Self-adaptive
Enable DHCP	☐
IPv4 Address	192 . 168 . 75 . 74
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	192 . 168 . 75 . 1
Preferred DNS Server	
Alternate DNS Server	
Internal NIC IPv4 Ad...	192 . 168 . 1 . 1

At the bottom, there are three buttons: 'Previous', 'Next' (highlighted in yellow), and 'Cancel'.

7. Click **Next** after you configured the network parameters. The HDD management Wizard window will open. If a new DVR is shipped with a pre-configured HDD, nothing needs to be done in this window. If you installed an HDD or replaced the HDD, select (check the box for) the HDD, then click **Init** to setup the disk for the DVR. **NOTE:** **Init** will erase all data from the disk. When the initialization is complete, click **Next** to continue.

The screenshot shows an 'HDD management Wizard' window. It features a table with the following data:

☐	L...	Capacity	Status	Property	Type	Free Space
☒	5	931.51GB	Normal	R/W	Local	930GB

Below the table, there is a large empty area and a yellow 'Init' button with a mouse cursor over it. At the bottom, there are three buttons: 'Previous', 'Next', and 'Cancel'.

8. Use the camera record mode Wizard as follows:
 - a. On the Cameras line at the top of the window, open the drop-down list and select the camera you want to configure for recording.



- b. Click the **Start Recording** box to check it.
- c. Select one of the recording modes: either **Normal** or **Motion Detection** mode.



- d. Repeat "a" and "b" above for each camera, and/or click **Copy** to copy the recording mode of the selected camera to other cameras in the system. The screen presented below is for a 4-channel NVR.



- e. Click **OK** when the recording mode for each camera is selected. The Wizard will close and the NVR will present the **Live View** display. For more information about the Live View display, see “SECTION 4 Live View Interface” on page 41.



Live View display

9. While viewing video from each cameras in the **Live View** display, adjust the direction of each camera to aim it at its surveillance target. Follow the manufacturer's recommended procedures for aiming the cameras.

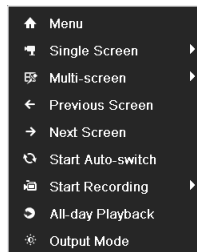


Live View display after camera adjustments

2.5 Access the Menu system

After the initial setup of your DVR using the Wizard, the Menus interface enables you to refine your configuration settings and expand the functionality of the system. To use most menus, the user must log into the DVR system, either locally or remotely, with administrative privileges.

To open the Menu system from the Live View screen, right click anywhere in the screen, then select **Menu**.



If ID Authentication is not disabled (see the **Menu | Configuration | General** settings), a login window will open. In the Login window, select a User Name with administrative privileges, enter its password, then click **OK**. **NOTE:** A window of Menu icons will open. The default user “admin” has the default password of “1111”.



2.6 Customize camera configurations

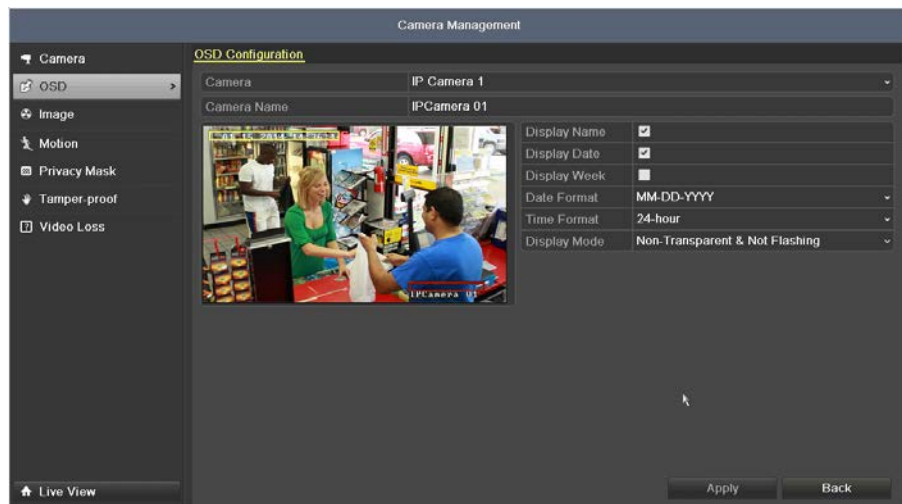
The **Camera** menu lists all cameras configured in the NVR, and shows the channel, name, timestamp, etc. of each. Using this menu, you can assign names to each camera for easy recognition, select areas for motion detection and privacy blocking, and configure alarm features (if supported by the camera). To customize the configuration settings of each camera, do the following:

1. Open the Camera menu: right click anywhere on the Live View desktop, then click **Menu | Camera**.



2.6.1 Camera OSD setup

1. Click **OSD** in the left frame to open the OSD submenu.



2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Check or un-check the boxes to display the Name and Date. Also, edit the name in the **Camera Name** field, and select the date and time options you prefer.

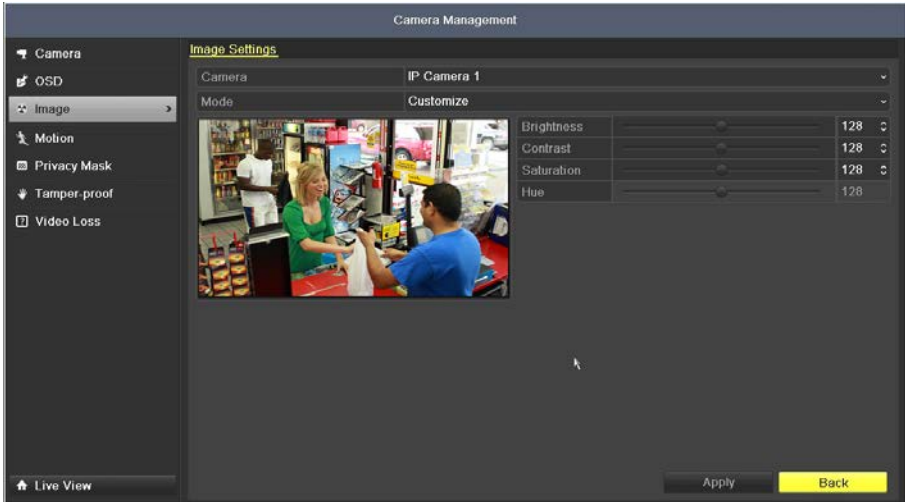
NOTE

Cameras you manage with the NVR may be setup internally to show on-screen information, such as name and timestamp. To change these settings, you must reconfigure the camera directly; the NVR cannot change these internal settings.

4. Click **Apply** to save your settings for this camera.
5. Click **Copy** to copy the Name and Date format settings to other cameras managed by the NVR, if needed.
6. Repeat sub-steps **2** through **5** above for each camera managed by the NVR, if necessary.

2.6.2 Camera Image setup

1. Click **Image** in the left frame to open the Image submenu.

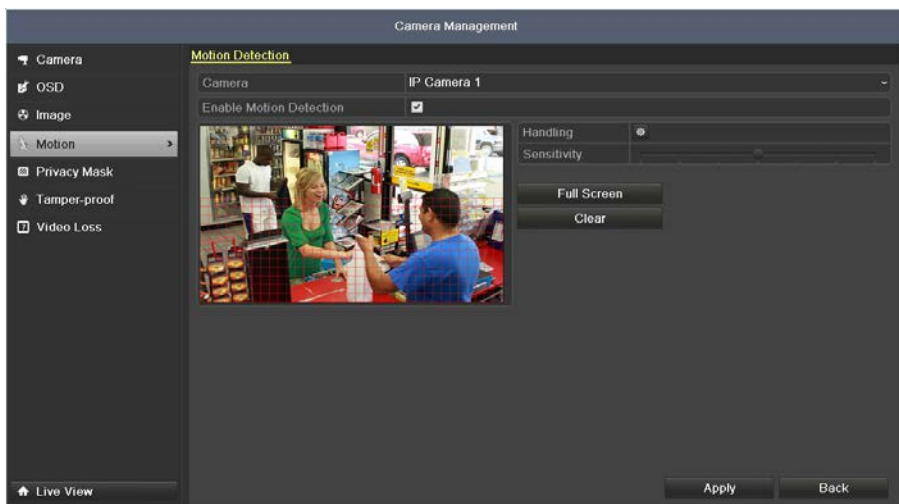


2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Drag the **Brightness**, **Contrast**, **Saturation** and **Hue** adjustment markers left or right to perfect the image from the camera. For some adjustments, you can click the up (▲) or down (▼) icons near the adjustment value (on the right side) to incrementally change the value of those adjustment.
4. Click **Apply** to save your settings for this camera.
5. Repeat sub-steps **2** through **4** above for each camera managed by the NVR, if necessary.

2.6.3 Camera Motion detection setup

1. Click **Motion** in the left frame to open the Motion submenu.

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2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Check or un-check the box to **Enable Motion Detection**. If you checked the box, the grid shown over the video image is the area where motion will be detected. To change this area, do the following:

NOTE

Defining a specific area where you want to detect for motion is more efficient for the NVR than searching for motion anywhere in the image.

- a. Click **Clear** to erase the grid.
- b. Drag the mouse pointer across a rectangular area of the video image where you want to detect for motion. You can select multiple motion detection area.
- c. Click **Apply** to save your settings.

NOTE

*Test your settings during broad conditions to ensure that motion in the field of view triggers an action. You may need to return to this menu later to adjust the **Sensitivity** slider to ensure it is working adequately.*

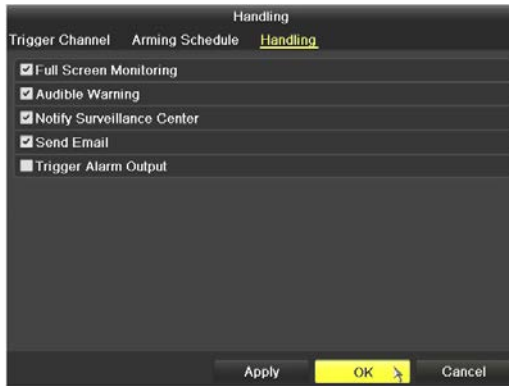
4. Click the **Handling** icon. In the Handling **Trigger Channel** tab:



- a. Select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.
- b. Click the **Arming Schedule** tab. In this tab, you can define a daily schedule for up to eight weeks (56 days) when motion detection is monitored. Time periods cannot overlap.



- c. Click **Apply** to save the settings. You can also click Copy to copy the Arming Schedule setup in the window to other days of the week.
- d. Click the **Handling** tab. In the Handling tab, you can cause certain actions to occur when motion triggered recording occurs.



- e. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the **Motion** menu. The **Notify Surveillance Center** and **Send Email** options require additional network settings.
5. In the **Motion** menu, click **Apply** to save your settings for this camera.
6. Repeat sub-steps **2** through **5** above for each camera managed by the NVR, if necessary.

2.6.4 Camera Privacy Mask setup

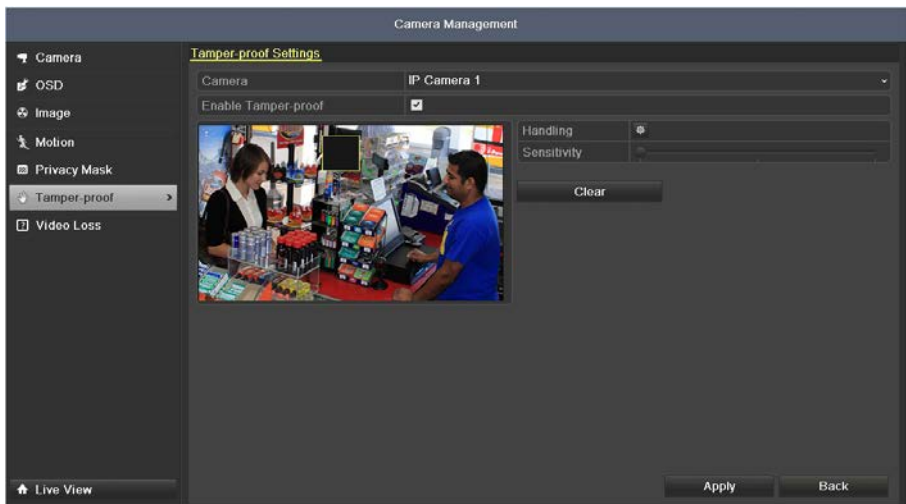
1. Click **Privacy Mask** in the left frame to open the Privacy Mask submenu.



2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Check or un-check the box to **Enable Privacy Mask**. If you checked the box, drag a rectangle across the area of the video that you want to block. In the video above, the area over the keyboard was blocked to prevent others from seeing passwords or other private information that might be entered into the register.
4. You can create up to four privacy zones for each camera. Use the “clear” buttons to remove zones you created.
5. Click **Apply** to save your settings for this camera.
6. Repeat sub-steps **2** through **5** above for each camera managed by the NVR, if necessary.

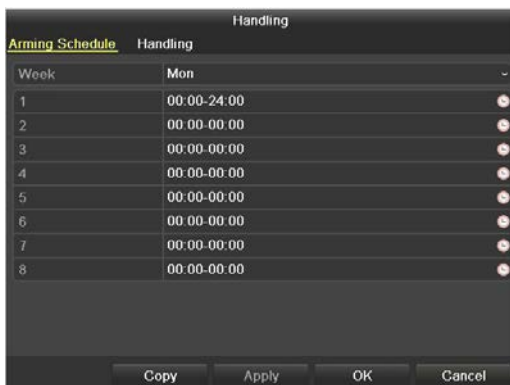
2.6.5 Camera Tamper-proof setup

1. Click **Tamper-proof** in the left frame to open the Tamper-proof submenu. This feature detects if the camera is moved to show a different scene or if it was the view was obstructed. If a camera support this feature, the NVR allows you to enable it.

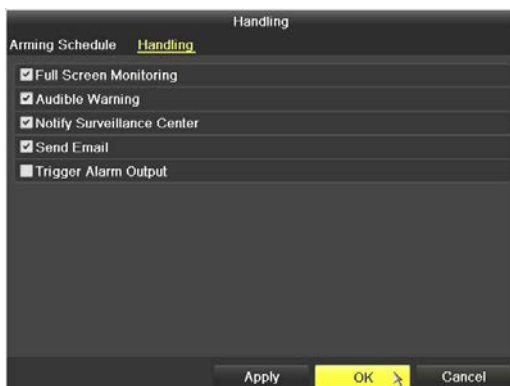


2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Check or un-check the box to **Enable Tamper-proof**. If you checked the box, drag a rectangle across the area of the video that you want to monitor.
4. Click the **Handling** icon. In the Handling window:

SECTION 2: INSTALLING THE SYSTEM



- In the **Arming Schedule** tab, define a daily schedule for up to eight weeks (56 days) when the camera is monitored for tamper. Time periods cannot overlap.
- Click the **Handling** tab. In the Handling tab, you can cause certain actions to occur when tampering occurs.



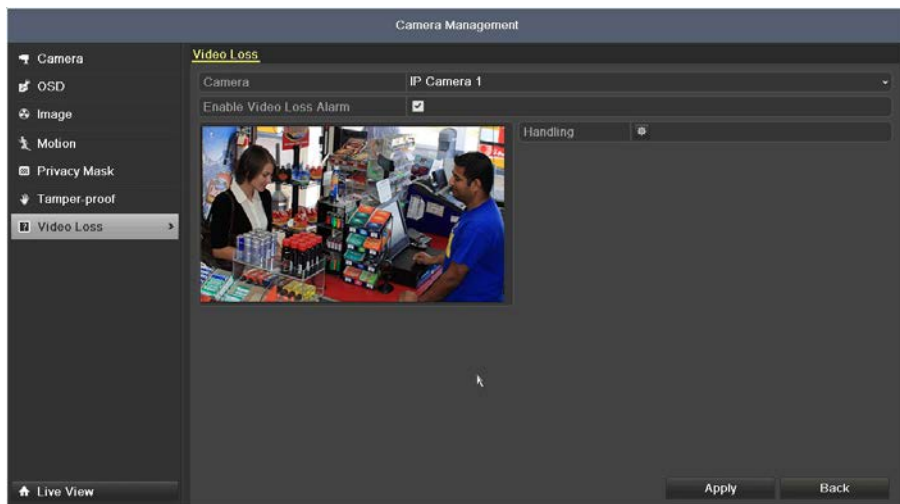
- Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the **Tamper-proof** menu. The **Send Email** option requires additional network settings. See "SECTION 7 Network Settings" on page 89 for more information.
- In the **Tamper-proof** menu, click **Apply** to save your settings for this camera.
- Repeat sub-steps 2 through 4 above for each camera managed by the NVR, if necessary.

NOTE

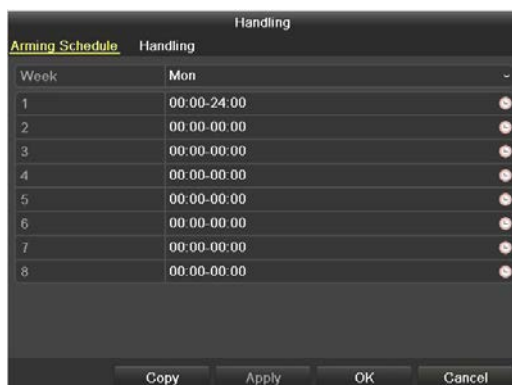
Test your settings during broad conditions to ensure that your tamper-proof settings trigger an action. You may need to return to this menu later to adjust the **Sensitivity** slider to ensure the feature is working properly.

2.6.6 Camera Video Loss setup

1. Click **Video Loss** in the left frame to open the Video loss submenu.



2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.
3. Check or un-check the box to **Enable Video Loss**. If you checked the box, do the following:
 - a. Click the **Handling** icon.



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- b. In the **Arming Schedule** tab, define a daily schedule for up to eight weeks (56 days) when motion detection is monitored. Time periods cannot overlap.
- c. Click the **Handling** tab. In the Handling tab, you can cause certain actions to occur when video loss occurs.



- d. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the **Video Loss** menu. The **Notify Surveillance Center** and **Send Email** options require additional network settings.
4. In the **Video Loss** menu, click **Apply** to save your settings for this camera.
5. Repeat sub-steps **2** through **4** above for each camera managed by the NVR, if necessary.

2.7 Adding cameras manually

IP cameras can connect to the NVR either through the IP ports on the back panel of the NVR, or through the LAN the NVR is connected to. IP cameras connected to the IP ports on the back panel are automatically added to the system by the NVR. Cameras that exist on the LAN must be added manually through the NVR Camera menus. Use the following procedural guidelines installed on the LAN.

NOTE For a lists IP cameras compatible with your NVR, refer to: "APPENDIX D NVR Compatible Cameras" on page 126.

1. Open the Camera Management menu. Go to **Main menu | Camera | Camera**



- a. Verify that the manufacturer and model of the camera you want to add is compatible with the NVR. Contact your NVR equipment supplier for more information.
- b. Click **Search** to search the online cameras. The camera you want to add should be discovered during the search process.



- c. In the list of cameras, select a CAMER NO. (D1 .. D8 or D1 .. D4) IP port on the back of the NVR) that is that has no camera connected to it and no camera assigned to it on the Camera Management window above (**NOTE:** for the ports listed in the window shown above, only D1 and D2 have cameras assigned to them). For that port entry, click the icon in the **Edit** column. The **Edit IP Camera** window will open.

SECTION 2: INSTALLING THE SYSTEM



The screenshot shows the 'Edit IP Camera' dialog box with the following fields and values:

Field	Value
IP Camera No.	D3
Adding Method	Plug-and-Play
IP Camera Address	
Protocol	Manual
Manage Port	8000
Channel No.	1
User Name	admin
Admin Password	

Buttons at the bottom: Apply, OK, Cancel.

- d. On the **Adding Method** line, open the drop down list and select **Manual**.
- e. On the **IP Camera Address** line, click the entry field and use the pop-up keyboard to enter the IP address of the camera you want to add.



The screenshot shows the 'Edit IP Camera' dialog box with the following fields and values:

Field	Value
IP Camera No.	D3
Adding Method	Manual
IP Camera Address	192.168.75.36
Protocol	
Manage Port	
Channel No.	
User Name	
Admin Password	

Buttons at the bottom: Apply, OK, Cancel.

- f. On the **Protocol** line, click the entry field and select the camera protocol (usually the manufacturer's name) of the camera you want to add. The Protocol is shown in the camera data discovered during the search. You can also choose a preset custom protocol if it applies. See "2.7.2 Configuring customized protocols" on page 30 for more information.
- g. On the **Management** line, click the entry field and use the pop-up keyboard to enter the Manage port of the camera you want to add. The Manage Port number is shown in the camera data discovered during the search.
- h. On the **User Name** and **Password** lines, click the entry fields and use the pop-up keyboard to enter the administrative username and password of the camera you want to add. Password can contain only numerical characters. For new cameras, this information is the default setting. It is usually included in the documentation provided with the camera.

IP Camera No.	D3
Adding Method	Manual
IP Camera Address	192.168.75.36
Protocol	3SVISION
Manage Port	80
Channel No.	1
User Name	root
Admin Password	****

Apply OK Cancel

- i. Click **Apply**, and then click **OK** to close the IP Camera Edit window.
- j. In the IP Camera screen, click the Refresh button at the bottom of the camera list. The camera you added will appear and show a Connected status, usually within a three minutes.
- k. For the camera you added, click the icon in the Live column to verify that a video image is being received by the NVR.

2.7.1 Editing camera options

After adding of the IP cameras that are installed on the local LAN to the NVR, some camera setup information can be reconfigured.

1. For the entry in the camera channel table, click the icon in the edit column.

IP Camera No.	D3
Adding Method	Manual
IP Camera Address	192.168.75.36
Protocol	3SVISION
Manage Port	80
Channel No.	1
User Name	root
Admin Password	****

Apply OK Cancel

2. Change the settings in the Edit IP Camera menu as needed.

- Click **Apply** to save the settings, and then click **OK** to close the menu.

2.7.2 Configuring customized protocols

To use cameras not configured with the standard protocols, you can customize protocols for them. There are 16 customized protocols provided in the system; you can select one and configure its corresponding parameters.

- In the **IP Camera** screen, click the **Protocol** button to open the **Protocol Management** menu.

The screenshot shows the 'Protocol Management' window. It contains a table with the following fields and values:

Costume Protocol	Custom Protocol 1	
Protocol Name	Custom 1	
Stream Type	Main Stream	Substream
Enable Substream		☒
Type	RTSP	RTSP
Transfer Protocol	Auto	Auto
Port	554	554
Path		

Below the table, there is an example URL: `Example: [Type]//[IP Address] [Port]/[Path]`
`rtsp://192.168.0.1:554/ch1/main/av_stream`

At the bottom, there are three buttons: 'Apply', 'OK' (highlighted in yellow), and 'Cancel'.

NOTE

Before customizing the protocol for the network camera, contact the manufacturer for specific information regarding main stream and sub-stream setup requirements.

Example: The format of the URL is: [Type]//[IP Address of the network camera]:[Port]/[Path]. E.g., `rtsp://192.168.1.55:554/ch1/main/av_stream`.

- Protocol Name:** Edit the name for the custom protocol.
 - Enable Substream:** If the network camera does not support sub-stream or the sub-stream is not needed, leave the checkbox empty.
 - Type:** The network camera adopting custom protocol must support getting stream through standard RTSP.
 - Transfer Protocol:** Select the transfer protocol for the custom protocol.
 - Port:** Set the port No. for the custom protocol.
 - Path:** Set the resource path for the custom protocol. E.g., `ch1/main/av_stream`.
- Click **Apply** to save the settings, and then click **OK** to close the menu. After adding the customized protocols, you can select the protocol name listed in the drop down list. See the screen below.



6. Select the custom protocol you configured, and then enter the IP address, user name and password of the camera.
7. Click **Add** to add the camera.

2.8 Configuring HDD settings

2.8.1 Checking HDD status

Check the status of the HDD installed in the DVR to assure it is functioning normally.

1. Open the HDD Information display. Go to **Menu | HDD | General**



2. Check the status of the HDD. If the status is:
 - **Normal** or **Sleeping** - The HDD is working normally.
 - **Uninitialized** or **Abnormal** - Initialize the HDD before continuing. Check the select box of the HDD to initialize, then click the **Init** button at the bottom of the screen.
 - **Failed** - If the HDD failed during or after initialization, replace the HDD.
3. If you installed a new HDD in your NVR chassis, select the HDD in the window then click **Init** to initialize it for use. Allow the initialization procedure to complete before continuing.

2.8.2 Managing Network Storage

Additional file storage can be added to your DVR using up to 8 NAS disks, or up to 7 NAS disks with 1 IP SAN disk. To configure this storage:

1. Open the HDD Information interface. Go to **Menu | HDD | General**
2. Click the **Add** button at the bottom of the screen to open the **Add NetHDD** menu.

Add NetHDD	
NetHDD	NetHDD 1
Type	NAS
NetHDD IP Address	...
NetHDD Directory	

OK Cancel

3. In the **NetHDD** drop down list, select the NetHDD ID (NetHDD 1 .. NetHDD 8) you want to add.
4. In the **Type** drop down list select either NAS or IP SAN.
5. Configure the device type you selected.
 - **For a NAS disk:**
 - i. Click the **NetHDD IP Address** field to open a virtual keyboard and enter the IP address of the storage device.



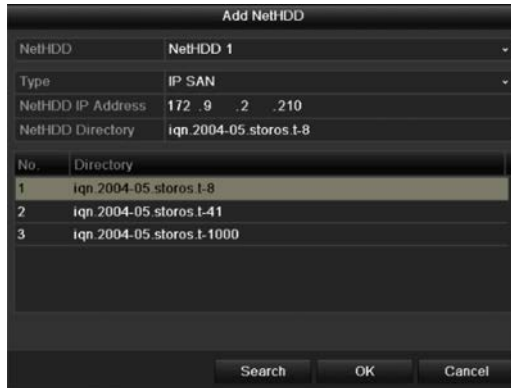
- ii. Select the NAS disk directory from the list shown, or manually enter the directory in the text field of NetHDD Directory.



- iii. Click **OK** to add the NAS disk to your system.

— **For an IP SAN disk:**

- i. In the **Add NetHDD** window, click the **Type field**, then select **IP SAN**.
- ii. Enter the NetHDD IP address in the text field.
- iii. Click **Search** to discover the available IP SAN disk directories on the network.
- iv. Select the IP SAN disk directory from the list shown below.



- v. Click **OK** to add the selected IP SAN disk to your system.

NOTE: If the added NetHDD is uninitialized, select it and click the **Init** button for initialization. Initializing an storage device erases all data saved on the disk.

6. Add additional disks as needed up to a maximum of 8 NAS, or 7 NAS and 1 IP SAN.

2.8.3 Configuring the HDD

By default, all cameras will record to the one partition(s) of the internal HDD(s). However, the NVR can be configured to allocate space in one of two modes:

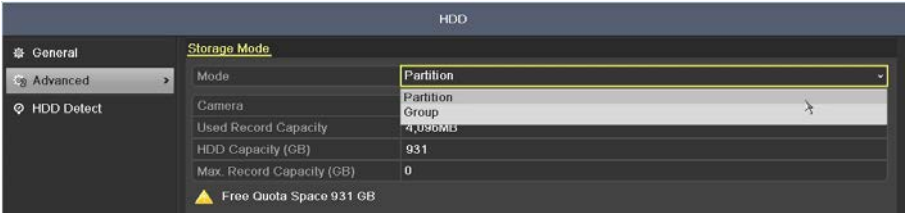
- **Partition** mode: Each camera can be allocated it's own recording space on a storage device (HDD).
- **Group** mode: Groups of cameras can each be allocated recording space on a storage device. Configuring the HDD for Group recording mode requires an NVR reboot.

To use this feature:

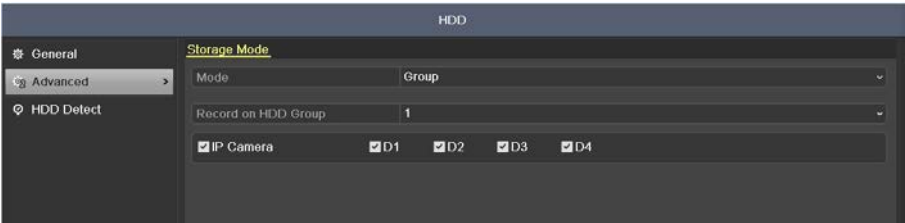
1. Go to **Menu | HDD | General**.



2. Click **Advanced** to check the storage mode of the HDD.



- a. In the **Mode** select field, select either **Partition** or **Group**.
 - i. If you selected **Partition**, select a camera in the **Camera** field, then enter the size, in gigabytes, in the **Max. Record Capacity** field. Repeat this step for each camera. Click **Apply**.
 - ii. If you selected **Group**, the following window will open. In this window, select a group number, then select the cameras that are part of that group. Note that a NVR restart is required to use configure the NVR for this feature.



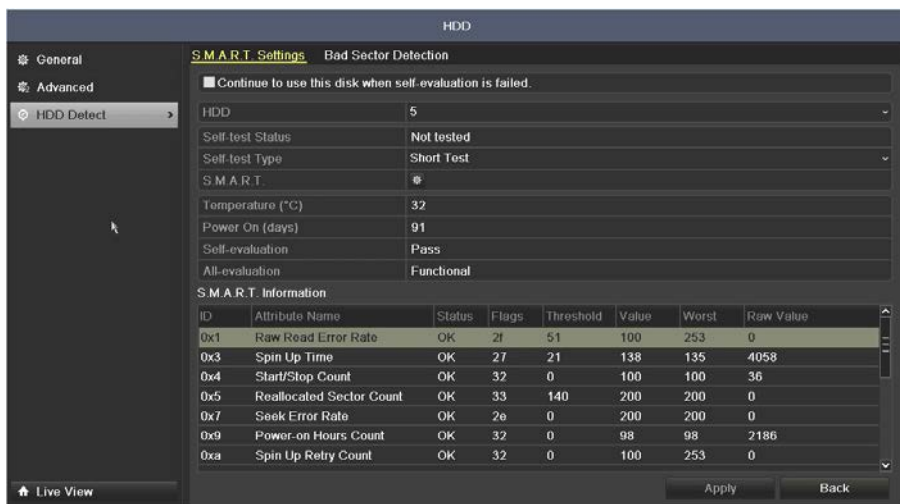
2.8.4 HDD Detect

The **HDD Detect** feature provides two methods of monitoring the HDD: display of **S.M.A.R.T.** (Self-Monitoring, Analysis and Reporting Technology) data, and **Bad Sector Detection**. These methods can be used to assure the normal functioning of the disk, and anticipate failures.

S.M.A.R.T. Display

1. Open the S.M.A.R.T. display menu. Go to **Menu | HDD | HDD Detect**

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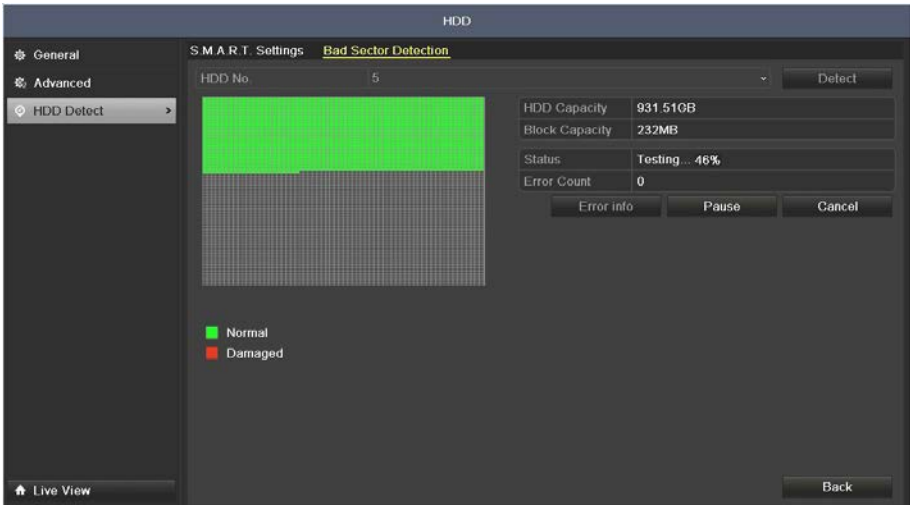
2. To execute a self-evaluation test on an HDD:
 - a. On the **HDD** line, open the drop down list to select the HDD of interest.
 - b. On the **Self-test Type** line, open the drop down list to select the type of test to execute. You can choose either Short Test, Expanded Test or Conveyance Test.
 - c. Click the icon on the **S.M.A.R.T.** line to execute the test. Allow the test to complete before continuing. The result of the test is shown on the Self-evaluation line.
3. Examine the S.M.A.R.T. data provided for the HDD. Check to ensure that the data in the value and Worst column does not exceed the data in the Threshold column.

NOTE

S.M.A.R.T. data provided by each HDD manufacturer is usually different. Refer to the manufacturer's website for S.M.A.R.T. data definitions.

Bad Sector Detection

1. Open the Bad Sector Detection menu. Go to **Menu | HDD | HDD Detect | Bad Sector Detection**
2. On the **HDD No.** line, open the drop down list and select the number of the HDD you want to test.
3. Click the **Detect** button to start the detection. Bad sectors are identified in the array as red colored cells.



Click **Pause** to temporarily stop the scan, and click **Cancel** to end the scan.

Click **Error info** to see the detailed damage information.

2.9 Configuring Exception Alarms

The DVR monitors for and respond to certain system-related alarm conditions (exception alarms). Monitoring for and response to these exceptions are configurable.

Exception alarm conditions include:

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error or unformatted HDD.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Record Exception:** No space exists for saving recorded files.

Responses to exception alarms include:

- **Audible Warning:** Trigger an audible beep when an alarm is detected.
- **Notify Surveillance Center:** Sends a signal to remote alarm host when exception is detected.
- **Send Email:** Send an email with alarm information to a user or users when an alarm is detected.
- **Trigger Alarm Output:** Trigger an alarm output when exception is detected.

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To configure exception alarms:

1. Open the **Exception** menu. Go to **Menu | Configuration | Exceptions**



2. On the **Exception Type** line, open the drop down list and select the exception condition you want to configure. If you select **All**, all exception conditions will be treated the way you configure the response.
3. Select the response options you want to use.
4. Click **Apply** to save your settings.
5. Repeat these steps for other Exception Types you want to configure.

SECTION 3

Startup, Shutdown, Reboot

After the DVR and cameras are installed, the DVR system must be configured to function in the surveillance mode(s) that best serve your needs. This chapter includes the essential steps to get your system running, including configuring the DVR date and time, and setting up the LAN interface, cameras and recording modes. Advanced features, including remote access, video export, adding user names and setting user permissions, etc. are described in later sections of this manual.

3.1 Starting Up, Shutting Down and Rebooting the DVR

3.1.1 Startup

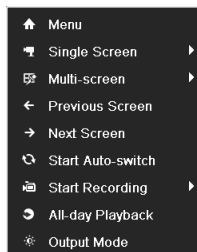
Proper startup and shutdown procedures are essential for getting the most out of your DVR. To startup:

1. Check the power cable is plugged into a standard electrical outlet. It is HIGHLY recommended that an Uninterruptible Power supply (UPS) be used in conjunction with the device.
2. Rock the **POWER** switch on the back panel to the on ("I") position. The Power indicator LED on the front panel should turn green indicating that the unit is powered on.
3. After startup, the Power indicator LED remains green. A splash screen will appear on the monitor.

3.1.2 Shutdown

To shut down the DVR:

1. Right click anywhere on the desktop to open the pop-up window, then select **Menu**.



2. If a **Login** window opens, select a User Name with administrative privileges, enter the appropriate Password, then click **OK**.

NOTE The default User Name with administrative privileges and its associated Password are **admin** and **1111**.

3. In the **Menu** window, click the **Shutdown** icon, then click **Shutdown** in the pop-up window.



4. Click **Yes** in the **Attention** window.
5. When the message **Please power off!** appears, rock the power switch on the back panel to the off ("0") position.

3.1.3 Rebooting the DVR

In the Shutdown menu, you can also reboot the DVR.

1. Open the Shutdown menu by clicking **Menu | Shutdown**.
2. In the **Menu** window, click the **Shutdown** icon, then click **Reboot** in the pop-up window.
3. Click **Yes** in the **Attention** window.



SECTION 4 Live View Interface

The Live View interface is the primary camera viewing and monitoring mode. It can be configured to present video from the cameras configured in the system singularly or in multi mode, or using a “patrol” feature wherein video from each of a select group of cameras is displayed singularly and sequentially, with each camera view shown for a preset duration (dwell). The Live View screen can be configured to display 1, 4, 6 or 8 camera channels concurrently, or playback recorded video.



Live View 2 * 2 multi-screen display

Each camera channel displayed on the Live View screen may contain one or both status icons in the upper-right corner of the viewing frame.

Live View Status icons

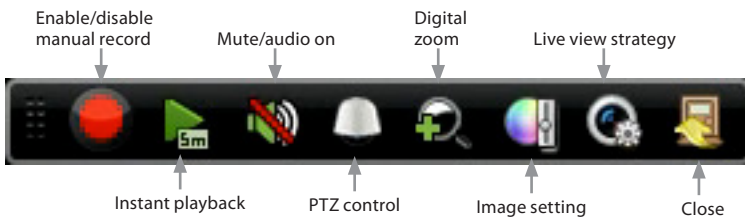
Icon	Type	Reason
	Alarm	Video loss, tampering, motion detection or sensor alarm
	Record	Manual record, schedule record, motion detection or alarm triggered record

SECTION 4: LIVE VIEW INTERFACE

Icon	Type	Reason
 	Record and Alarm	Both alarm and record status

4.1 Quick Setting Toolbar

Left-clicking the mouse on a viewing frame opens a Quick Setting Toolbar at the top or bottom of the frame.



Instant Playback: Plays what was recorded in the previous five minutes. Nothing is played if a recording was not made at that time.

PTZ Control: PTZ control is not supported.

Digital Zoom: Shows the selected portion of the camera image in full-screen mode. To select an area, left-click and drag to form a rectangle across the area to expand. See the figure below.

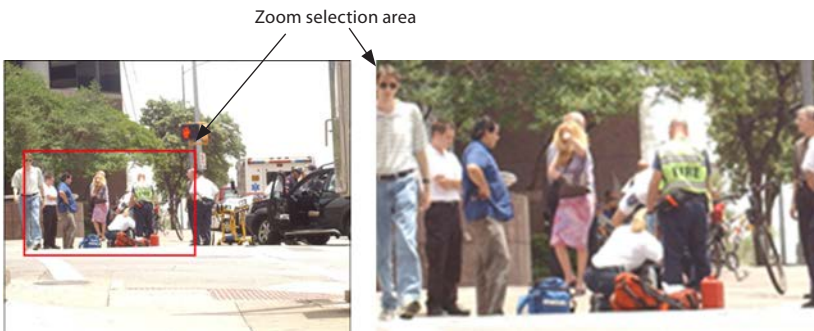
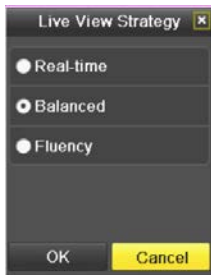


Image Settings: Click this icon to open menus for creating customized setting for the brightness, contrast, saturation and hue of the camera image. After making an adjustment on in this menu, the NVR will respond within a few seconds. Click **OK** when your adjustments are complete.

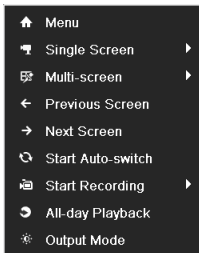


Live View Strategy: Use this feature to select Real-time, Balanced, Fluency. These features can improve the display of the camera channels.



4.2 Live View pop-up menu

Right-clicking the mouse on the desktop opens the pop-up window shown below.



Clicking one of the items listed produces the result described below.

- **Menu:** Opens the configuration menu window. See "SECTION 5 Record, Playback and Video Backup" on page 46.
- **Single Screen:** showing only one camera channel on the monitor. Open the drop-down list to select the camera channel you want to view.

SECTION 4: LIVE VIEW INTERFACE

- **Multi-screen:** opens a submenu where you can choose from several multi-channel screen configurations, including **2 * 2, 1 + 5, 1 + 7, 3 * 3**, in multi-screen mode, you can view video from multiple camera channels simultaneously.
- **Previous screen:** Move to the screen displayed previously.
- **Next screen:** Move to the screen displayed after the current one.
- **Start Auto-switch:** the screen is automatically switched from one camera channel to the next. You must set the dwell time before enabling auto-switch. Go to **Menu | Configuration | Live View | Dwell Time**.
- **Start Recording:** Select Normal Record and Motion Detection record from the drop-down list.
- **Output Mode:** opens a menu where you can select the output mode to Standard, Bright, Gentle or Vivid.
- **All-day Playback:** Opens a playback menu where you can playback video recorded at a specific time of the day. In If in Multi-screen mode, double-click on the viewing frame of the camera recording video you want to replay, then select All-day Playback. A marker on the timeline shows the time recording being played back was made.

4.2.1 Live View settings

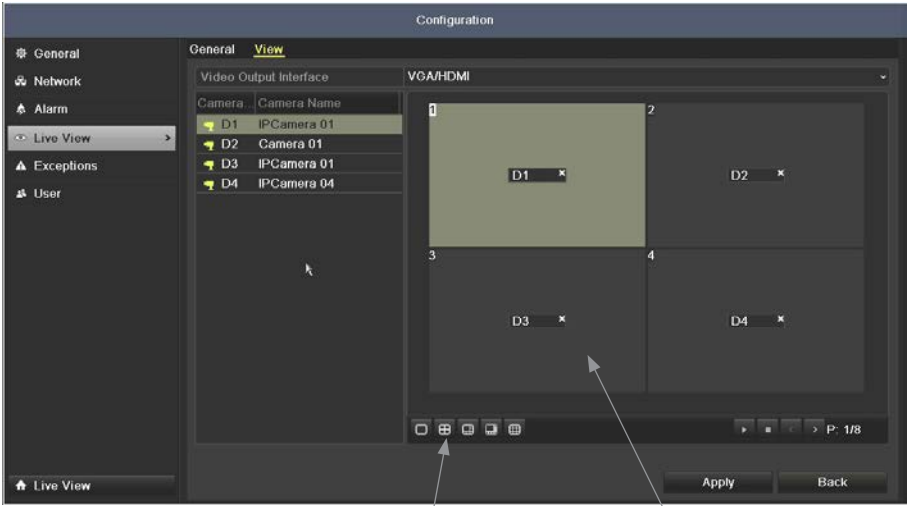
Live View settings can be customized according to differing needs. You can configure the screen frame split, placement of camera channels on the screen, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

1. Open the Live View Settings menu. Go to **Menu | Configuration | Live View**



Adjust the settings in the screen as needed:

- **Video Output Interface:** Designates the output to configure the settings for. Option includes only VGA/HDMI.
 - **Live View Mode:** Designates the display mode (screen split) to be used for Live View. **1 * 1** is a single camera view. Other options are **2 * 2, 1 + 5, 1 + 7, 3 * 3** etc.
 - **Dwell Time:** The time in seconds to dwell between switching channels when auto-switch is enabled in Live View.
 - **Enable Audio Output:** Enables/disables audio output for the selected video output.
 - **Event Output:** Designates the output to show event video. Option includes only VGA/HDMI.
 - **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.
2. After changing settings in the screen shown above, click **Apply**, and then click **Back**.
 3. Click the **View** tab at the top of the screen.



Single-, multi-screen select icons

Viewing screens

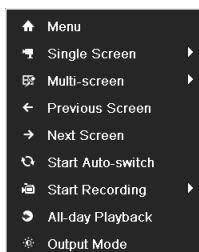
4. Click the single- or multi-screen select icon for the screen split you prefer. In the example shown above, a 2*2 screen is selected.
5. Click a viewing screens, then double-click the camera in the list on the right that you what to show there. When the selection is made, label in the viewing screen changes to the camera channel number. In the example above, only the top two screens are assigned.
6. Click the **Apply** button to save your setting.

SECTION 5

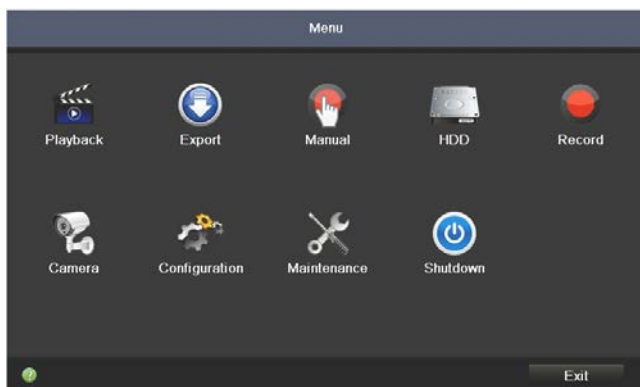
Record, Playback and Video Backup

After the initial setup of your NVR using the Wizard, the Menus interface enables you to refine your configuration settings and expand the functionality of the system. To use most menus, the user must log into the NVR system, either locally or remotely, with administrative privileges.

To open the Menu system from the Live View screen, right click anywhere in the screen, then select **Menu**.



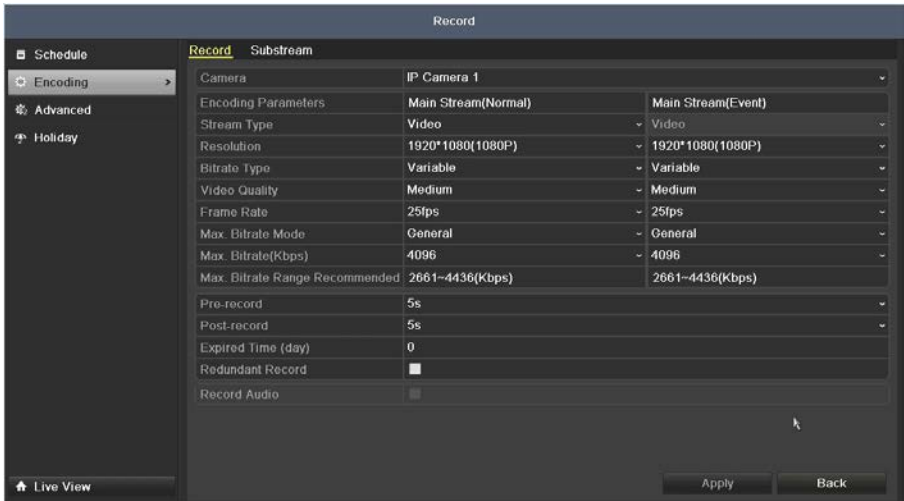
After selecting **Menu**, a login window will open. In the Login window, select a User Name with administrative privileges, enter its password, then click **OK**. A window of Menu icons will open. **NOTE:** When the system option **Enable ID Authentication** is disabled (see the **Configuration - General** settings submenu), the Login window to open the Menu does not appear.



5.1 Configuring record settings

5.1.1 Setting camera encoding parameters

1. Enter the **Record** settings interface to configure the encoding parameters. Go to **Menu | Record | Encoding**.



2. Select the **Record** tab page you want to configure. You can configure the stream type, the resolution, and other parameters.
 - **Pre-record:** The length of time you set to record before the scheduled time or event. For example, when an alarm triggered the recording at 10:00, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
 - **Post-record:** The length of time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
 - **Expired Time:** The expired time is the longest time a recording is kept on the HDD. If the deadline is reached, the file will be deleted. If you set the expired time to 0, the file will not be deleted. This parameter is usually determined in consideration of the capacity of the HDD.
 - **Record Audio:** Check the checkbox to enable audio recording.
3. Click **Apply** to save your new configuration settings.
4. Open the **Sub-stream** tab page.

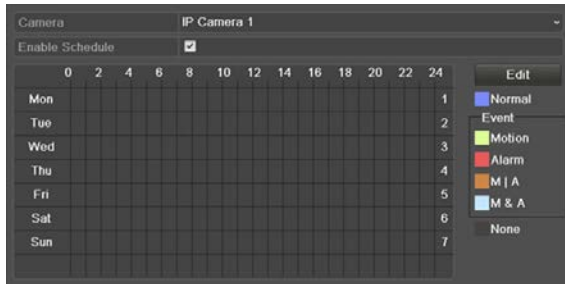


- a. Configure the parameters of the camera.
- b. Click **Apply** to save the settings.

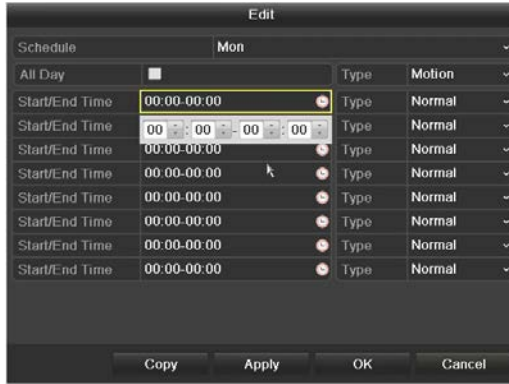
5.1.2 Configuring Record schedule

The record schedule can be used to automatically start and stops recording at preset times.

1. Open the Record Schedule menu. Go to **Menu | Record | Schedule**



2. To configure the Record schedule:
 - a. Open the **Camera** drop-down list to select the camera you want to configure.
 - b. Check the **Enable Schedule** box.
 - c. Click **Edit**, or use the graphical method to apply recording modes to hours of the day.
 - i. If you clicked the **Edit** button, a record schedule list opens.

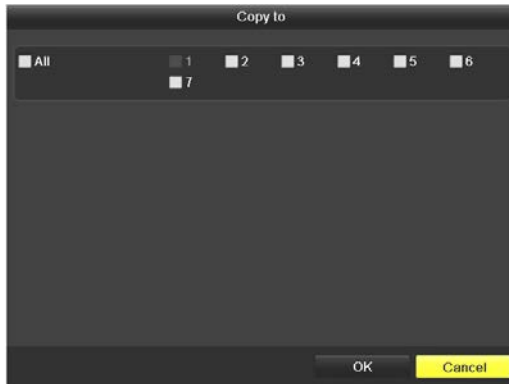


- Open the **Schedule** line drop down list and select the day you want to create a record schedule for.
- To schedule all-day recording, check the checkbox after the All Day item. To setup specific start and end times, click the clock icon to open a time setting popup window.
- In the **Type** column, select the type of recording trigger you want to use. “Normal” recording is continuous recording. “Motion” recording is recording triggered by some kind of motion detected in the video image. Alarm recording is not supported.
- Click **Apply** to save your settings.

NOTE

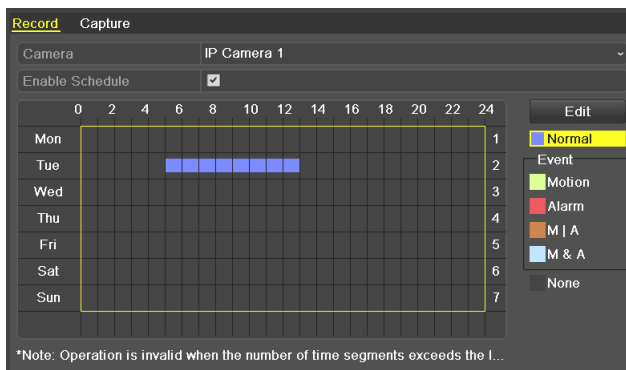
You can define up to eight recording time periods for each day, each with a specified recording type. Recording time periods cannot overlap with each other. Each recording period can use either **Normal** or **Motion** triggered recording.

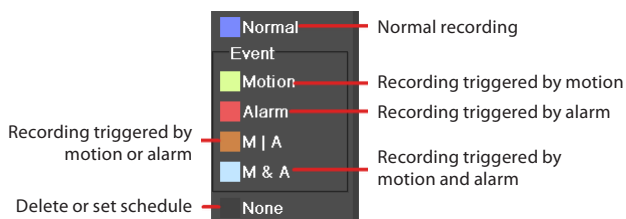
- Repeat the steps above to schedule recording for other days of the week. If the same schedule can also be applied to other days, click **Copy** (see the window below), select the days you want to copy the schedule to, then click **OK**.



Copy window for 4-channel NVR

- ii. To use the **graphical method** to draw the schedule:
 - Click the color icons on the right for the recording mode, then drag the mouse pointer across the area of the chart (day of the week, hours of the day) where you want to use that type of recording. Blocks on the chart, each representing 1 hour of one day, will be colored for the recording mode you selected. A descriptions of the color icons are shown in the figure below.



**NOTE**

Alarm triggered recording is available for only some cameras models supported by the Alibi NVR. Consult your vendor support organization for more information.



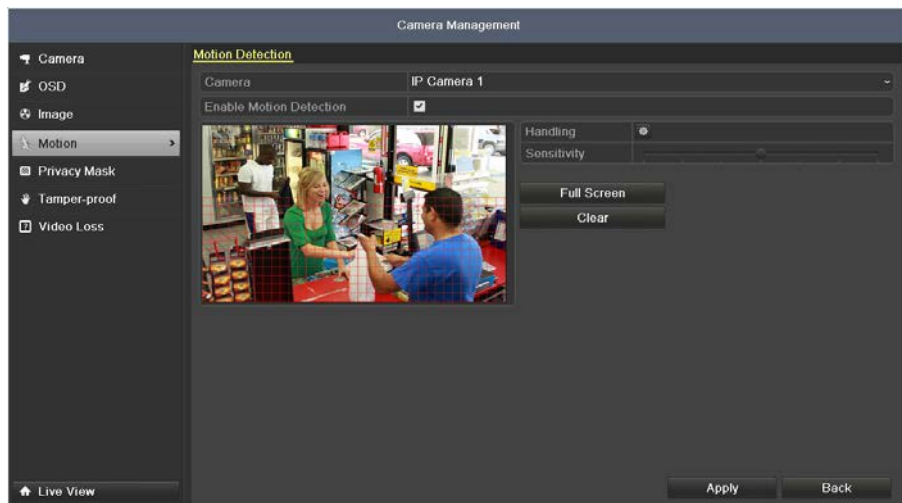
— Click **Apply** to validate the settings.

- If the settings can be applied to other camera channels, click **Copy**.
- In the **Copy** menu, click the channels you to which you want to copy the schedule to, then click **OK**.

5.1.3 Configuring Motion Detection Recording

Follow the steps to set the motion detection parameters. A motion detection events can trigger several kind of actions by the NVR, including channels to start recording, full screen monitoring, an audio warning, notification sent to the surveillance center, etc. Follow the steps below to schedule a recording triggered by a motion detection.

1. Open the Motion Detection menu. Go to **Menu | Camera | Motion**



2. To configure Motion Detection:
 - a. Choose camera you want to configure.
 - b. Check the **Enable Motion Detection** box.
 - c. Use the mouse to drag a rectangle across the area where you want to detect motion. A red grid will appear in the area(s) selected. If you want to sense for motion detection in all areas of the video, click **Full Screen**.

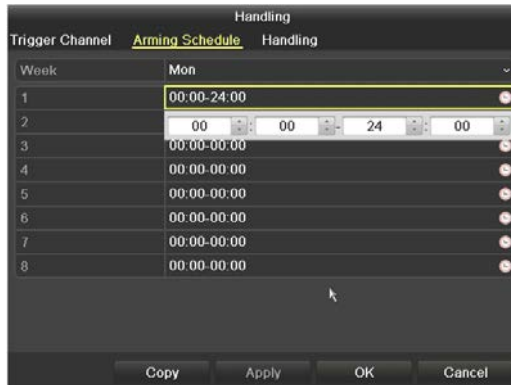
NOTE: The example shown here is for a 3SVision camera. Other camera brands and models have different methods for designating the motion detection areas.

To deselect an area selected for motion detection, drag a rectangle across that area. To clear all areas selected, click **Clear**.

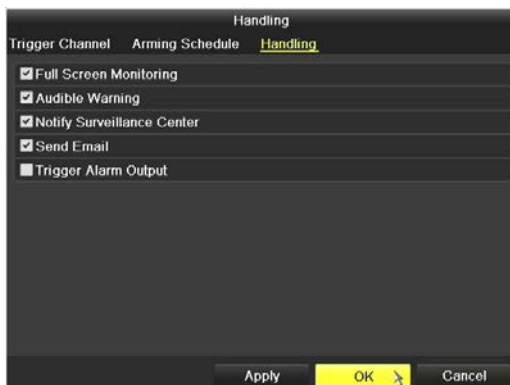
- d. Click **Handling**, to open the **Handling Trigger Channel** tab window.



- e. In the Handling **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.
- f. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when motion detection is monitored. Time periods cannot overlap.



- g. Click **Apply** to save the settings. You can also click Copy to copy the Arming Schedule setup in the window to other days of the week.
- h. Click the **Handling** tab. In the Handling tab, you can cause certain actions to occur when motion triggered recording occurs.



- i. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the Motion Detection menu. The **Trigger Alarm Output** option is not functional in the ALI-NVR3008P and ALI-NVR3004P.

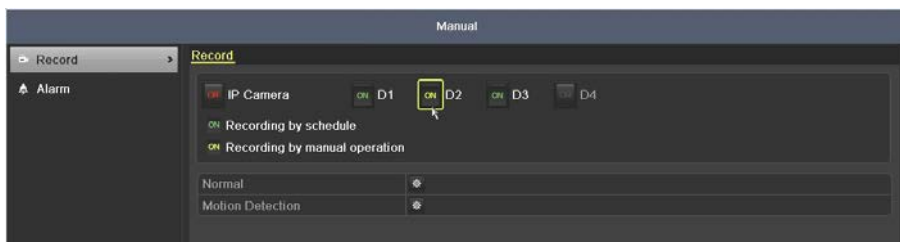
NOTE

Test your settings during broad conditions to ensure that motion in the field of view triggers an action. You may need to return to this menu later to adjust the **Sensitivity** slider to ensure it is working adequately.

5.1.4 Manual record

Follow the steps below to begin manual recording. Manual recording, once initiated, requires a manual cancel of the record. The manual recording can occur prior to the scheduled recording.

1. Open the Manual settings menu. Go to **Menu | Manual**.



2. To enable Manual Record:
 - a. Select **Record** on the left menu frame.
 - b. Click the status button before camera number to change the label from **OFF** to **ON**, if necessary. See the example above.
 - c. Click the icon after **Normal** or **Motion Detection**.

- d. When the Attention window opens, click **Yes**.



3. To disable Manual Record:
 - a. Select **Record** on the left menu frame.
 - b. Click the status button before camera number to change the label from ON to OFF.
 - c. Click the icon after **Normal** or **Motion Detection**.
 - d. When the Attention window opens, click **No**.

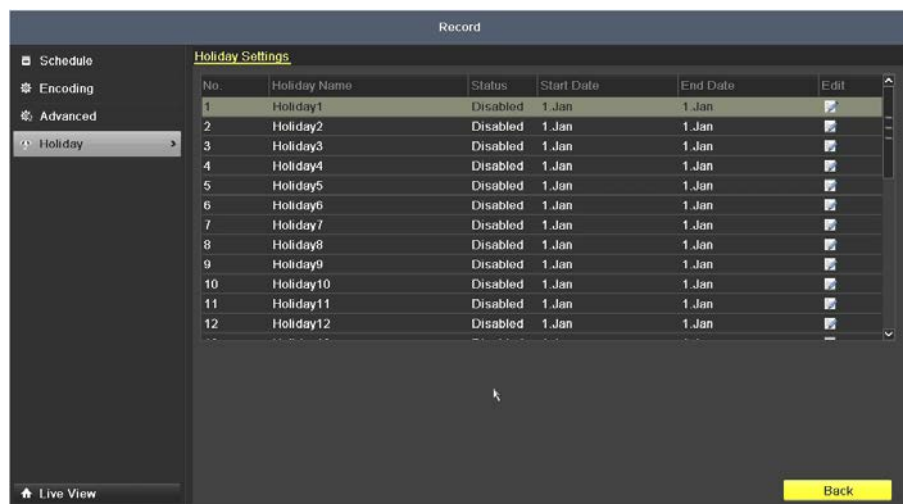
NOTE

Green "ON" icon means that the channel is configured with a record schedule.
If the NVR is rebooted, manual record operations are canceled.

5.1.5 Configuring Holiday recording

Follow the steps below to configure the record schedule on holiday for that year. You may want to have different plan for recording on holidays.

1. Enter the Record setting interface. Go to **Menu | Record | Holiday**



2. To Edit the Holiday schedule.
 - a. Click the icon in the Edit (right) column of the line you want to edit. The **Edit** window will open.

Edit	
Holiday Name	Holiday1
Enable	☒
Mode	By Month
Start Date	Jan 1
End Date	Jan 1

Apply OK Cancel

- b. In the **Edit** menu, check the **Enable** box.
 - c. Select Mode from the drop-down list to select the duration. There are three different modes for the date format to configure holiday schedule: Date, Week, and Month.
 - d. Set the start and end dates.
 - e. Click **Apply** to save settings.
 - f. Click **OK** to exit the Edit menu.
3. Open the Record Schedule settings menu to edit the holiday recording schedule. See “5.1.2 Configuring Record schedule” on page 57.

5.1.6 Configuring HDD Group for Recording

You can group the HDDs and save the record files in a specific HDD group. You must have multiple HDDs installed in the system to perform this configuration.

1. Open the HDD menu. Go to **Menu | HDD**



- Click **Advanced** in the left frame to open the **Storage Mode** menu.



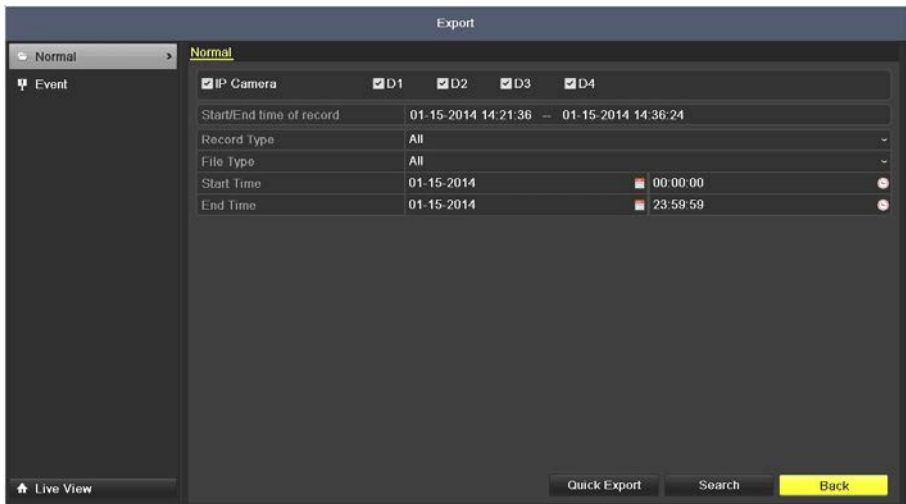
- Verify that the HDD mode is Group. If not, set it to Group, then click **Apply** and follow the on-screen instructions to reboot the NVR. See Return to the **HDD** menu.
- Click **General** in the left frame.
- Click the icon in the Edit column for the HDD to open the editing menu. To select the HDD group:
 - Choose a group number for the HDD group.
 - Select the channels you want to save in this group.
 - Click **Apply** and then in the pop-up message box, click **Yes** to save your settings.
 - Click **OK** to go to the menu window.
- Repeat the steps above to configure more HDD groups.

5.1.7 Files Protection

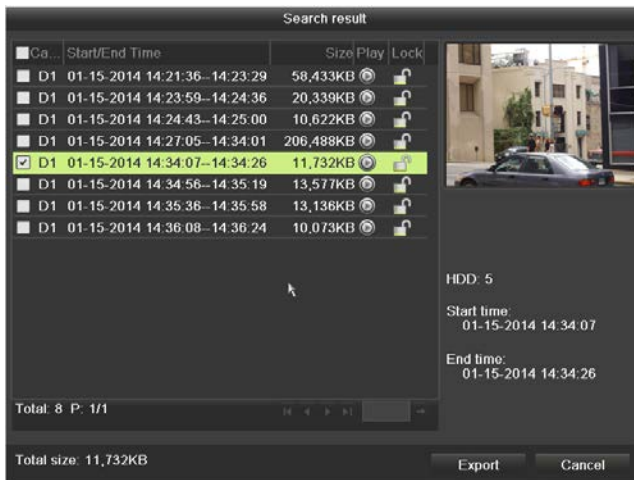
You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

- Open the **Export** menu. Go to **Menu | Export**

SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP



2. Check the box(es) for the channel(s) you want to investigate.
3. Configure the record type, File Type (locked or unlocked), and Start Time and End Time.
4. Click **Search** to show the results.



5. To protect the record files:

- a. Determine which files you want to protect, and then click the icon in the Lock column to show a “locked” padlock (indicating that the file is locked). Similarly, unlock files by clicking on the “locked” icon to show an “unlocked” padlock.
- b. Respond appropriately to the **Attention** pop-up window.



NOTE *The file of a recording in progress cannot be locked.*

5.2 Playback

5.2.1 Playing back video by channel

Playback the recorded video files of a specific channel in the live view mode. Channel switch is supported.

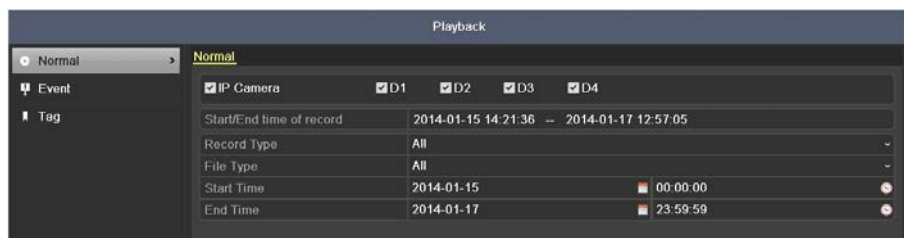
Instant playback by channel

In Live View mode, click the channel you want to playback, then click the playback icon on the quick setting toolbar. In the instant playback mode, only recordings made during the previous five minutes on the channel are played.

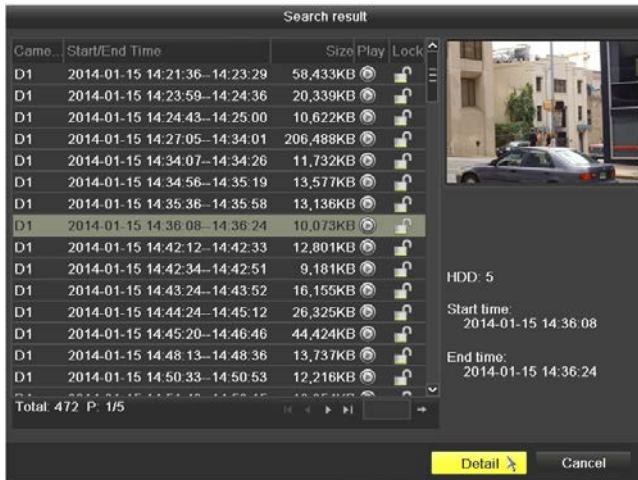


Playback by channel

1. Open the Playback menu. Go to **Menu | Playback**.
2. In the **Playback** screen, select the camera channel you want to playback. De-select the other channels.
3. Select the start and end times of the video segment you want to play.



4. Click the **Search** button.



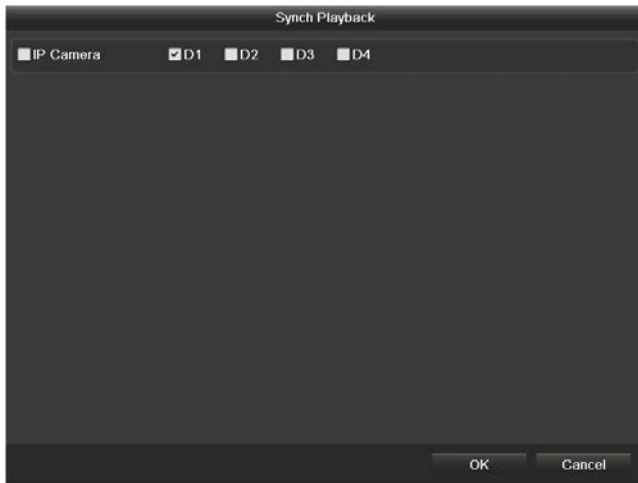
5. You can click the Details button to show when recordings were made with that camera (D1).



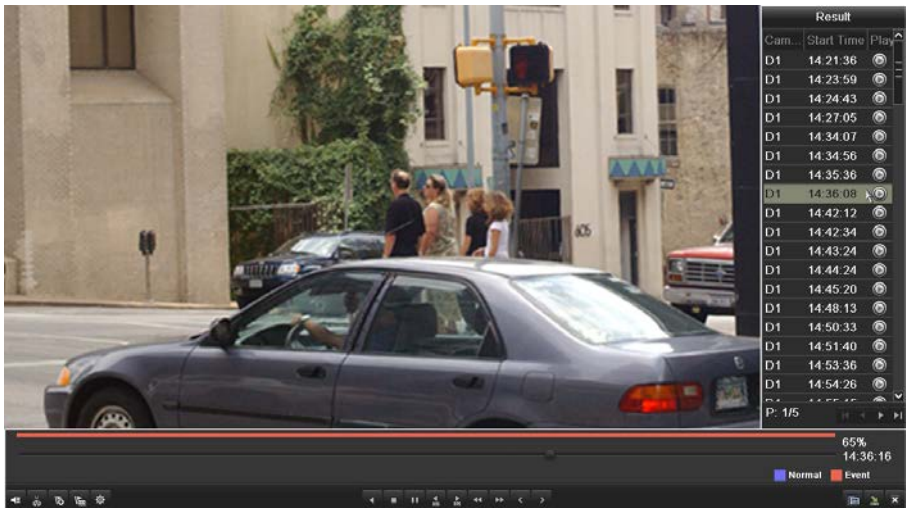
6. Click **Back** to return to the **Search Results** window.
7. In the **Search Results** windows, click the entry of the video segment you want to play, then click the icon in the **Play** column. The Sync Playback window will open.

SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP

8. In the **Sync Playback** window, select the other cameras you want to play with the camera selected. You can play up to 4 cameras synchronously. Click **OK** to continue.

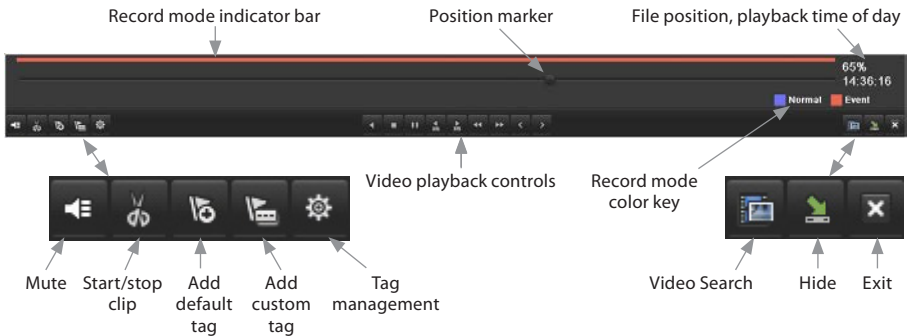


9. In the screen that opens, select the camera or cameras you want playback, then click **OK** to continue. By default, only the camera of the video you selected will play.



To open the **Results** list (the right frame - see above), move the mouse pointer to the right edge of the screen. You can play a different video segments by clicking the segment to highlight it, then clicking the **Play** icon associated with it. Move the mouse pointer away from the right side to close the frame.

The Playback control panel is shown below. The line across the top of the control panel shows the mode that initiated the recording. In the example above, the entire recording resulted from a normal, continuous recording configuration option.



Video playback controls allow you to control the speed and direction of the playback. You can also drag the file position marker to another position in the file.

You can hide the control panel during playback by clicking the Hide icon in the lower right corner. To exit playback, right click in the video frame, then select **Exit**, or click the Exit icon in the lower right corner.

The tag management icons in the lower left corner allow you to “tag” the video segment with a unique name. Click the **Add Tag** icon to open the Add Tag pop-up menu, then enter a Tag name. Tagged videos can easily searched for and retrieved later.



Right click anywhere on the video frame to open a pop-up menu. With this menu, you can return to Video Search, zoom in on the video, open and close the control panel at the bottom of the screen, and Exit.



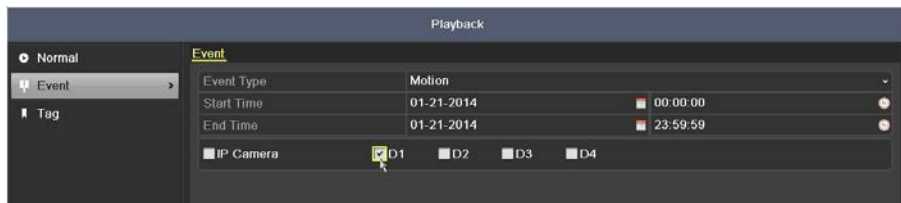
5.2.2 Playing back a motion event

The ALI-NVR3004P and ALI-NVR3008P can search for and playback recordings triggered by motion events.

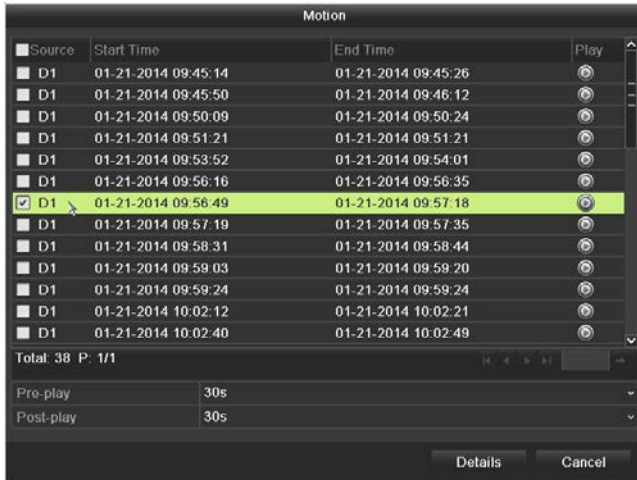
1. Open the Playback menu. Go to **Menu | Playback**
2. In the left frame, click **Event**.



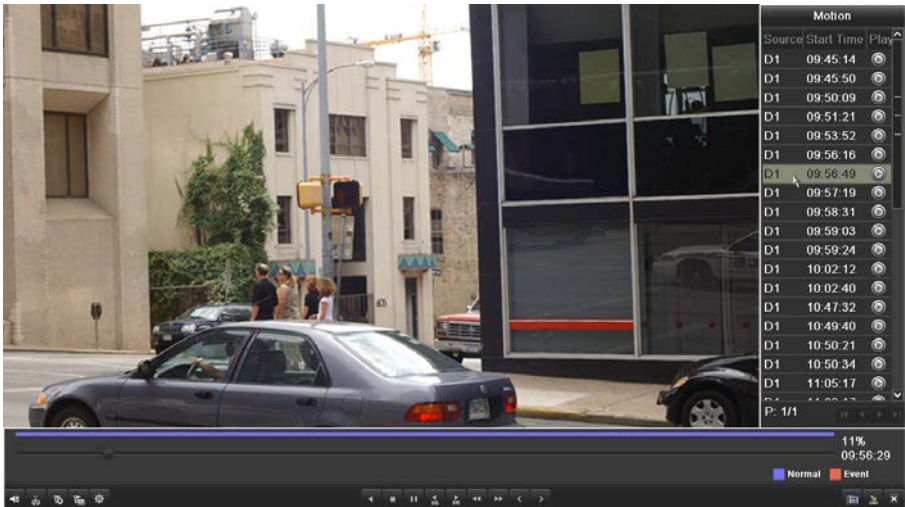
3. In the drop **Event Type** down-down list, select, for example, **Motion**.
4. Open the calendar and time pop-up windows to select the Start Time and End Time of the timespan you want to search.
5. Check the boxes of the cameras associated with the motion search.



6. Click **Search** to generate a list of motion detected events.



7. Select the video clip from the list, then click the **Play** icon associated with it.



The control panel at the bottom of the screen is described earlier in this section. See “5.2.1 Playing back video by channel” on page 59.

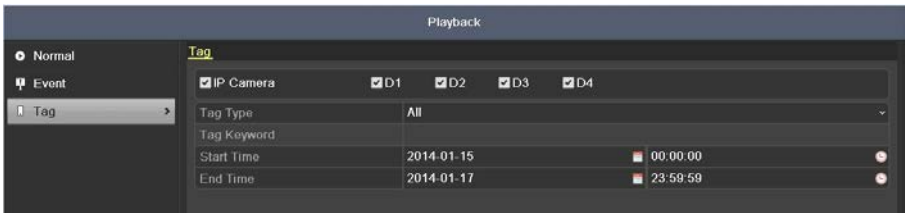
8. To open the search result list during video playback, move the mouse cursor to the right edge of the screen.

- To playback a different motion event video clip, click the segment to highlight it, then click the associated **Play** icon.

5.2.3 Playback by Tag

You can easily search for and play back video files that were tagged.

- Open the Playback menu. Go to **Menu | Playback**
- In the left frame, click **Tag**.
- Check the boxes of the cameras associated with the tagged video files.
- Open the calendar and time pop-up windows to select the **Start Time** and **End Time** of the timespan you want to search.



- Click **Search** to generate a list of tagged video files.



- Select the video clip from the list, then click the **Play** icon associated with it.

The control panel at the bottom of the screen is described earlier in this section. See “5.2.1 Playing back video by channel” on page 59.



7. To open the search result list during video playback, move the mouse cursor to the right edge of the screen.
8. To playback a different motion event video clip, click the segment to highlight it, then click the associated **Play** icon.

In the screen above:

- Click the **Add default tag** icon in the lower left corner of the screen during video playback to add a default tag.
- Click the **Add customized tag** icon in the lower left corner of the screen during video playback to add a customized tag.

NOTE: You can add up to 64 tags to a single video file.

Tag management.

The tag management feature allows you to check, edit, and delete tags.

1. Click the **Tag management** icon in the lower left corner of the screen to open the **Tag management** window.



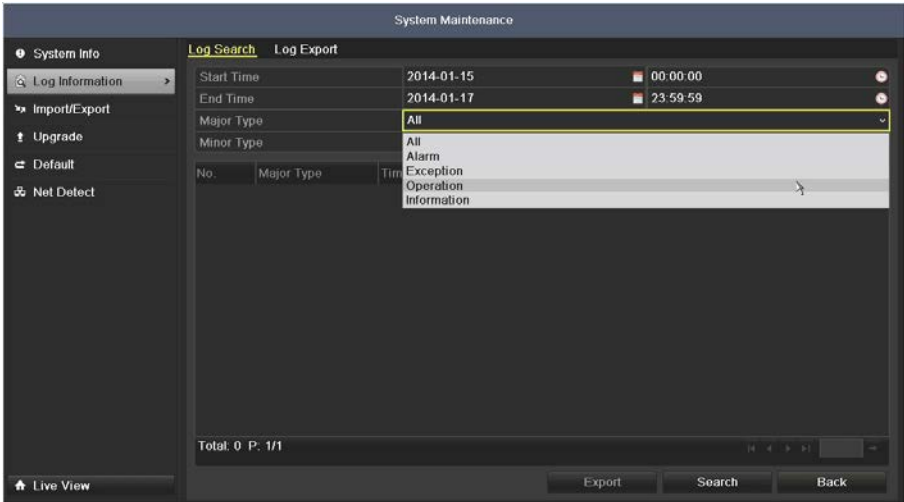
- To change the name of a tag, select (highlight) a tag in the list, then click the icon in the Edit column.
 - * Click the tag name, use the pop-up keyboard to change the name, click **Enter**, then click **OK**.
- To delete a tag, select (highlight) a tag in the list, then click the icon in the Delete column.

5.2.4 Playback from System Logs

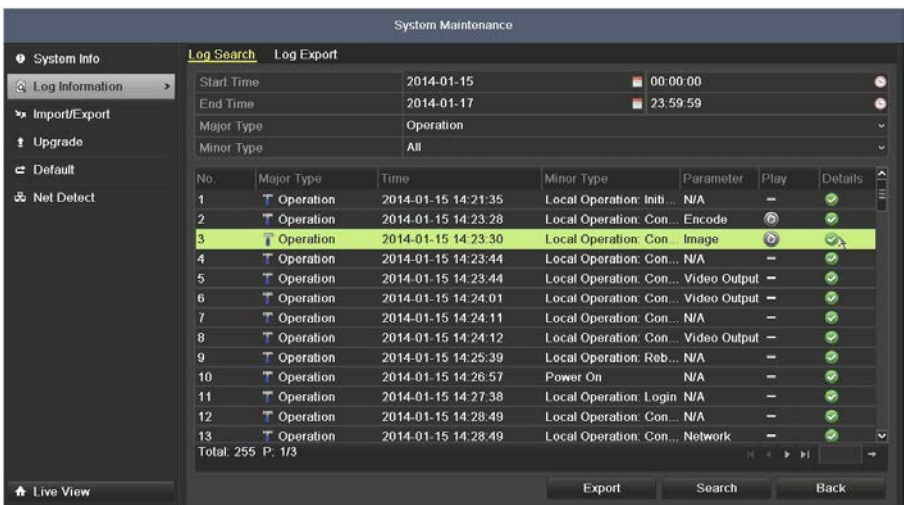
You can search for video clips through system logs. System logs include the following types of entries:

- Alarms events - Start/stop motion detection, start/stop tamper detection etc.
- Exception conditions - Video loss, illegal login, HDD full/error, IP camera disconnected, network disconnected, etc.
- Information events - Start/stop recording, local/network HDD information, HDD S.M.A.R.T., etc.
- Operation events - power on, login, local operation logout, etc.

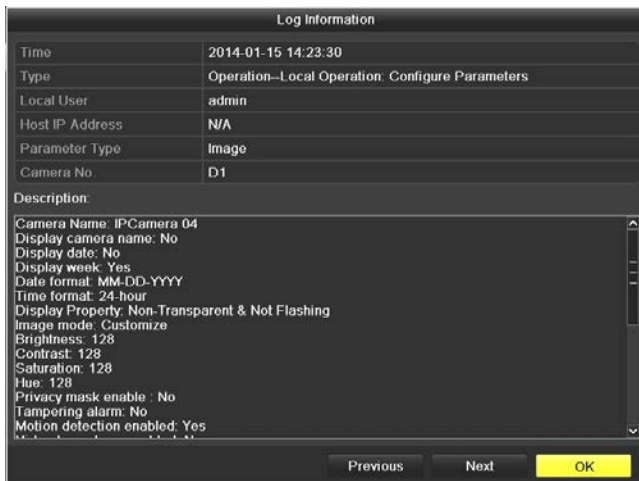
1. Open the Log Information screen. Go to **Menu | Maintenance | Log Information**
2. Click **Log Search** tab to enter Playback by System Logs.



3. Select a Start Time, End Time, Major Type and Minor Type.
4. Click **Search**. If the search didn't find a file matching your search criteria, the message **No matched log file.** will appear.



- Choose a log with record file and click the playback button to play the file, or click the icon in the Details column to see more information about the entry. If there is no playback file associated with the log entry, the message box **No result found.** will appear. The Log Information Details screen is shown below.



5.2.5 Auxiliary Functions - Playback frame by frame

Play video files frame by frame, in case of checking image details of the video when abnormal events happen.

Using a Mouse:

Go to **Menu | Playback**

Playback a file. During playback, click the button ◀◀ until the speed changes to **Single**. One click on the playback screen advances playback to the next frame forward. Click ▶▶ to increase the playback speed in forward.

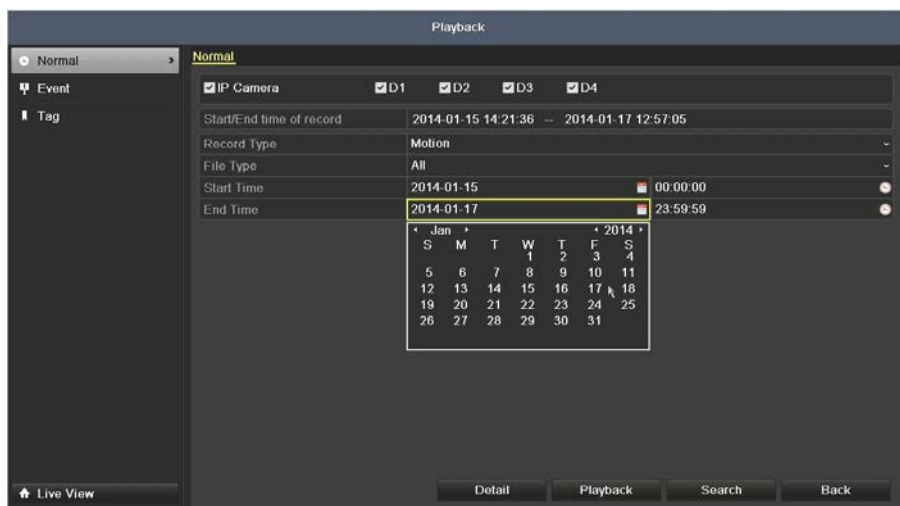
During reverse playback click the button ◀◀ until the speed changes to **Single**. One click on the playback screen advances playback to the next frame in reverse. Click ▶▶ to increase the playback speed in reverse.

5.2.6 Auxiliary Functions - Reverse Playback of Multi-channel

You can play back record files of multi-channel reversely. Up to 8-ch (with 1280*720 resolution) simultaneous reverse playback is supported; up to 4-ch (with 1920*1080p resolution) simultaneous reverse playback is supported and up to 1-ch (with 2560*1920 resolution) reverse playback is supported.

- Open the Playback menu. Go to **Menu | Playback**

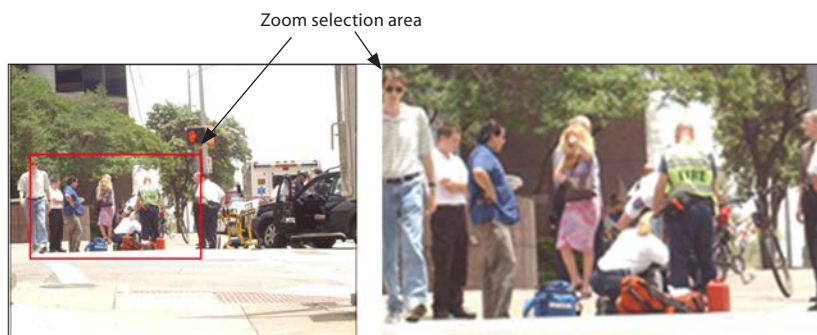
- On the IP Camera line, select multiple IP cameras by checking the boxes associated with them.



- Click **Playback** to play back the record files reversely.

5.2.7 Digital Zoom

- Click the magnifier button on the playback control bar to enter Digital Zoom screen.
- Use the mouse to draw a rectangle over the area you want to zoom in. The area can be enlarged up to 16 times the original size on the screen.



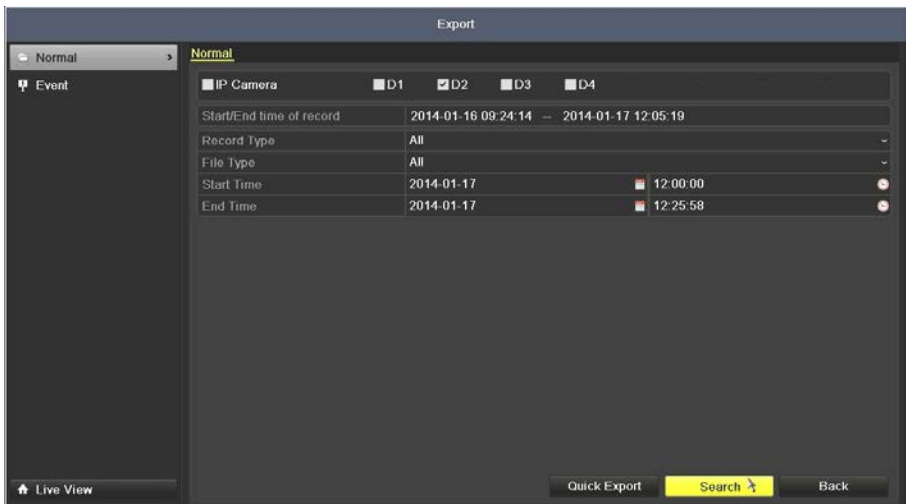
- Right-click on the image to exit the digital zoom mode.

5.3 Backing up Record Files - Export

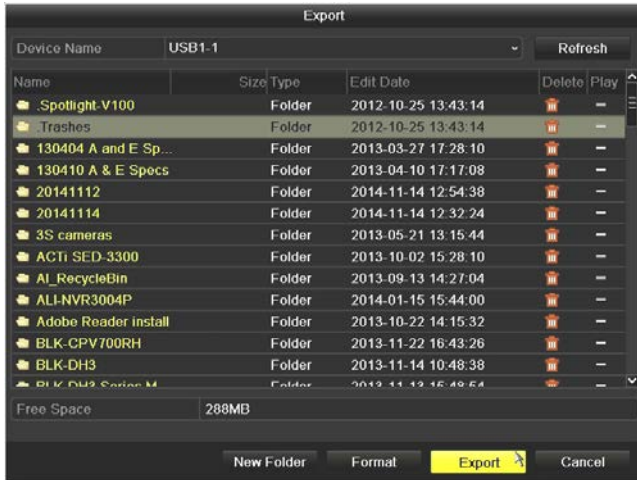
5.3.1 Quick Export

The Quick Export feature allows you to easily export (backup to an external device) video clips recorded over a 24 hours period from up to four selected camera channels.

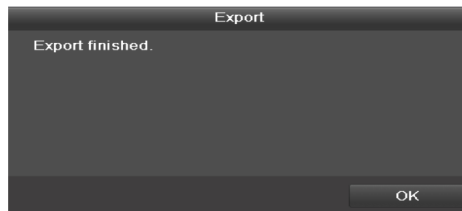
1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the NVR USB port.
2. Open the Export menu. Go to: **Menu | Export | Normal**



3. Check the boxes for the camera channels you want to back up.
4. Select the **Start Time** and **End Time** of the period when the video clips of interest were recorded. To change the time, click on the field, then select the target date or time from the pop-up menu. The time span cannot exceed 24 hours.
5. Click the **Quick Export** button. A pop-up window will open showing the file structure of your external storage device. If your USB device is not shown in the **Device Name** field, click the **Refresh** button.

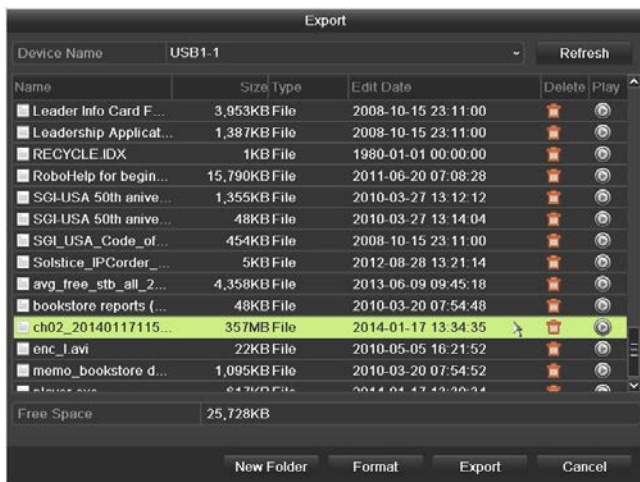


6. If the device you are exporting to is a rewritable device such as a USB flash drive, select the directory where you want to copy the files, or create a **New Folder**. **NOTE:** Some USB devices types do not include the **New Folder** and **Format** options, but may include an **Erase** option.
7. Click the **Export** button to start the **Export**. The Export window will list the files that were transferred. Allow the operation to finish before continuing.



8. Check the Export result by playing a file that was exported. In the Export window, click the file you want to play, then click the associated icon in the Play column.

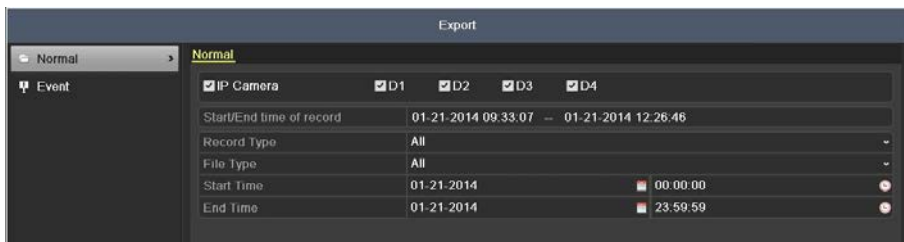
Note: The Player utility player.exe will be exported automatically during video file export.



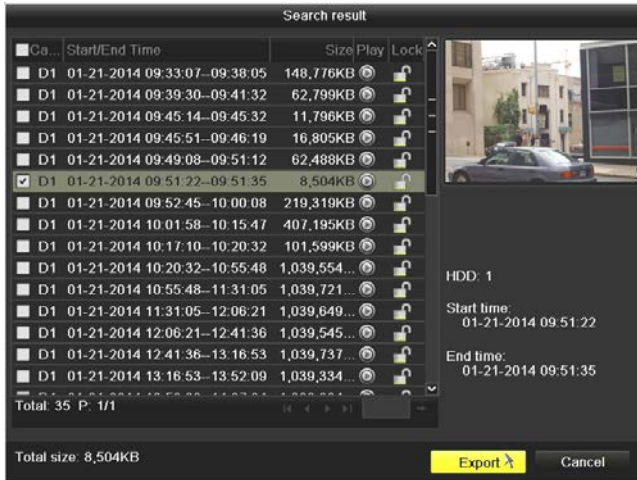
5.3.2 Export by video search

The Export by video search feature allows you to export specific video clips. The export operation writes the selected file(s) to an USB device.

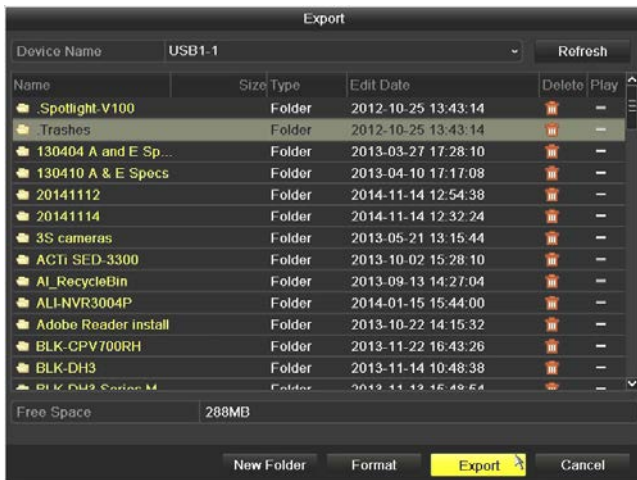
1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the NVR USB port.
2. Open the Export menu. Go to: **Menu | Export | Normal**



3. Check the boxes for the camera channels you want to back up.
4. Select the **Start Time** and **End Time** of the period when the video clips of interest were recorded. To change the time, click on the field, then select the target date or time from the pop-up menu.
5. Click **Search** to list the video clips recorded during the selected time span. In the **Search Result** list, you can play the video clip by clicking the icon in the Play column associated with the file.

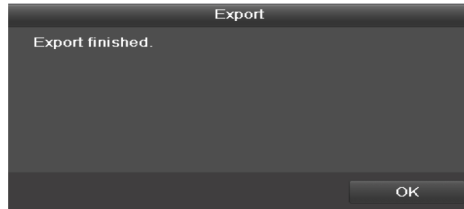


- Select the video clips you want to export by clicking the checkbox associated with the file. By default, all files are selected. You can deselect all files by clicking the checkbox in the table header, then click the check boxes for only those files you want to export.
- Click **Export**. A pop-up window will open showing the file structure of your external storage device. If your USB device is not shown in the **Device Name** field, click the **Refresh** button. **NOTE:** Some USB devices types include the **New Folder** and **Format** options, other types include only an **Erase** option.

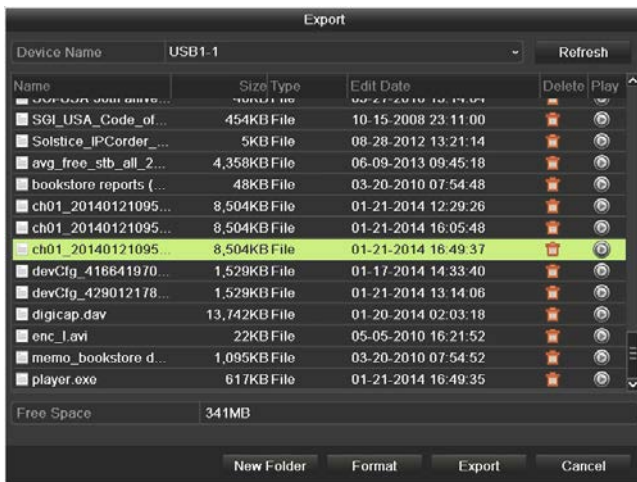


SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP

8. In the **Export** window, select the directory where you want to copy the files, or create a **New Folder**.
9. Click the **Export** button to start the **Export**. The Export window will list the files that were transferred. Allow the process to finish before continuing.



10. Check the Export result by playing a file that was exported. In the Export window, click the file you want to play, then click the associated icon in the Play column.



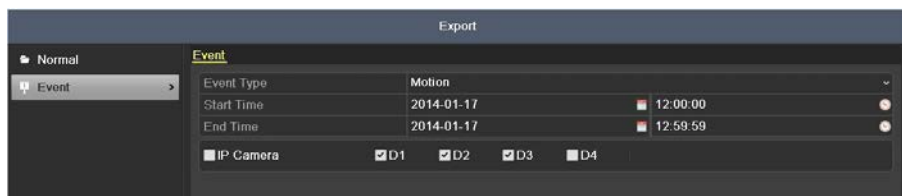
Note: The Player utility player.exe will be exported automatically during video file export.

5.3.3 Export by Event Search

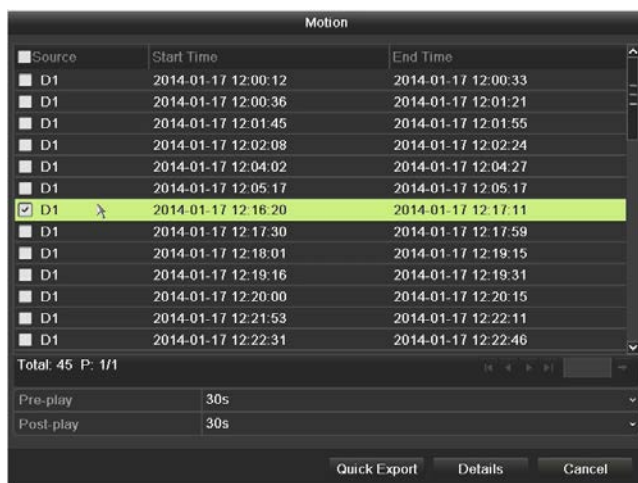
Video recordings triggered by Events, such as motion detection, can be searched for and exported to a USB storage device such as a USB flash drive or USB disk drive, or USB optical drive.

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the NVR USB port.

- Open the Export menu. Go to: **Menu | Export | Event**

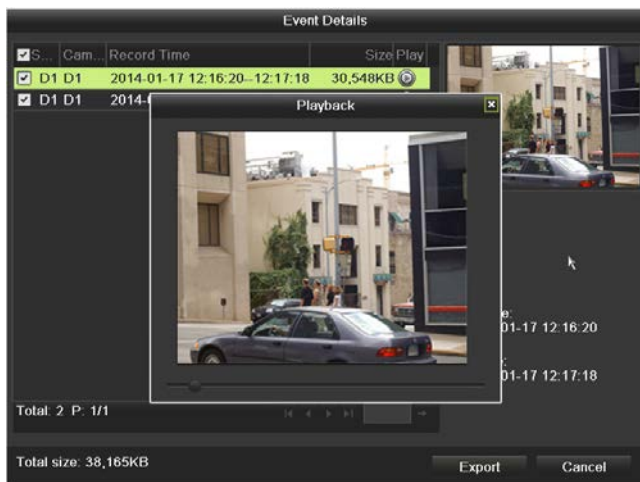


- On the Event Type line, select open the drop down list and select, for example, **Motion**.
- Select the **Start Time** and **End Time** of the period when the video clips of interest were recorded. To change the time, click on the field, then select the target date or time from the pop-up menu.
- Click **Search** to list the video clips recorded during the selected time span.

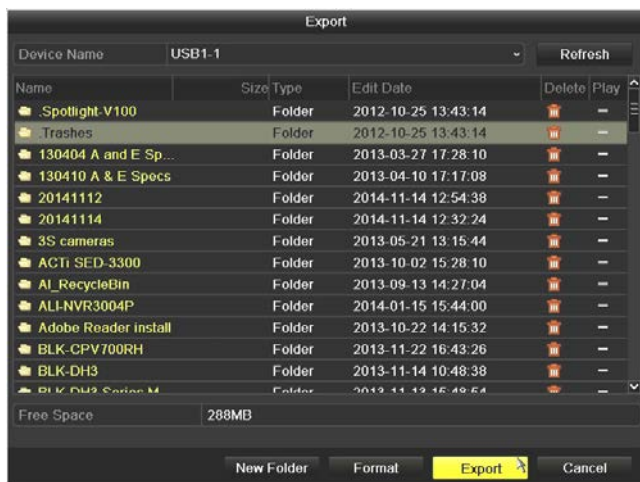


- To watch a video clip in the **Motion** (search result) list, click (highlight) the clip you want to watch, click **Details**, then in the **Event Details** window, click the icon in the **Play** column of the file.

SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP

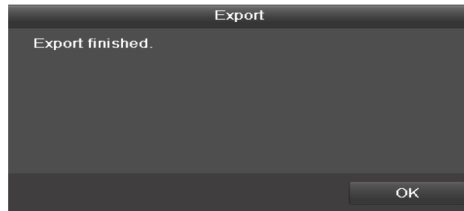


7. In the **Events Detail** window, click **Export** to open the Export window, or in the **Motion** (search result) list, check the boxes for the video clips you want to export, then click **Quick Export**. A pop-up window will open showing the file structure of your external storage device. If your USB device is not shown in the **Device Name** field, click the **Refresh** button. **NOTE:** Some USB devices types include the **New Folder** and **Format** options, other types include only an **Erase** option.



8. In the **Export** window, select the directory where you want to copy the files, or create a **New Folder**.

- Click the **Export** button to start the **Export**. The Export window will list the files that were transferred. Allow the operation to finish before continuing.



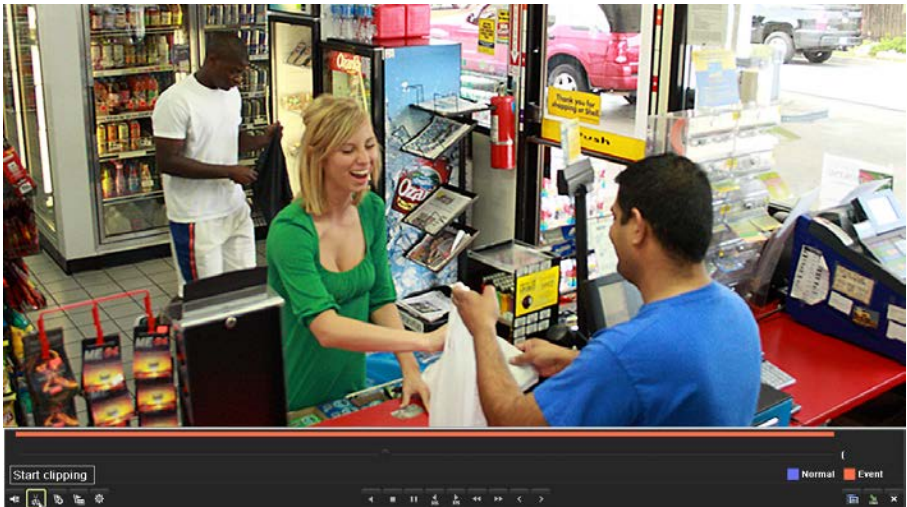
- Check the Export result by playing a file that was exported. In the Export window, click the file you want to play, then click the associated icon in the Play column.

Note: The Player utility player.exe will be exported automatically during video file export.

5.3.4 Exporting Video Clips during playback

Segments of video recordings can be backed up (exported) during playback. These files exported to a USB storage device such as a USB flash drive or USB disk drive, or USB optical drive.

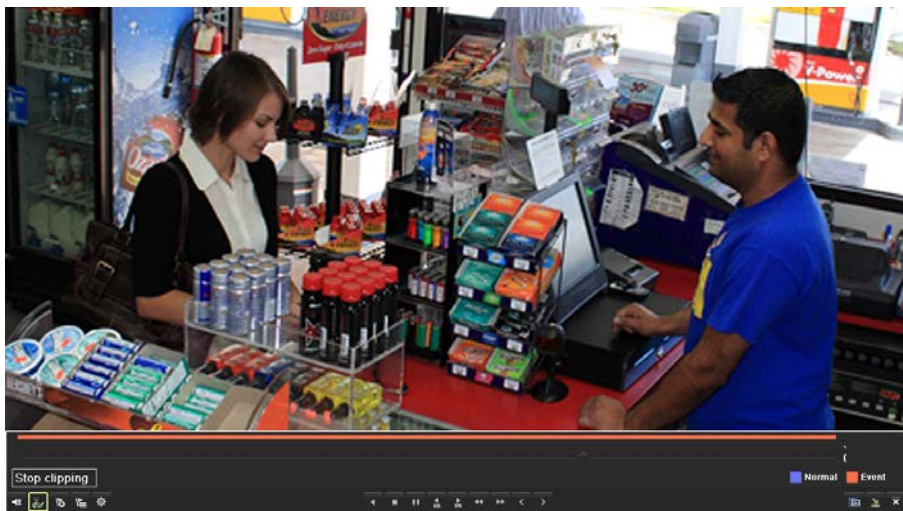
- Attach an USB storage device, such as a USB flash drive or USB disk drive or USB optical drive, to the NVR USB port.
- Playback a video file.



Clip (Start clipping) icon

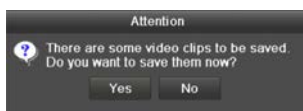
SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP

3. Advance the file playback to the start of the segment you want to export, then click the Clip icon (scissors) at the bottom of the screen to mark the start of the clip you want to save.
4. Advance the file playback to the end of the segment you want to export, then click the Clip icon (scissors) at the bottom of the screen to mark the end of the clip you want to save.

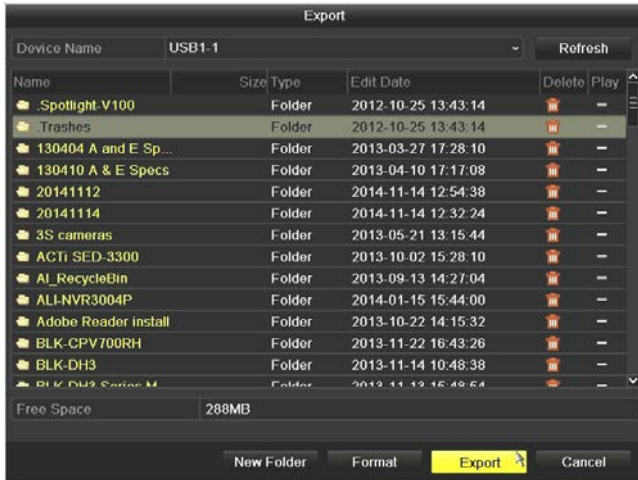


Clip (Stop clipping) icon

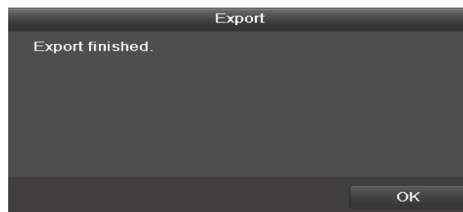
5. Right click anywhere in the video window, then select **Exit**. The Attention pop-up window shown below will appear.



6. Click **Yes** to save the video clip you marked.
7. In the **Export** window, select the directory where you want to save the file if available, or just click **xport**, then click **Quick Export**. A pop-up window will open showing the file structure of your external storage device. If your USB device is not shown in the **Device Name** field, click the **Refresh** button. **NOTE:** Some USB devices types include the **New Folder** and **Format** options, other types include only an **Erase** option.

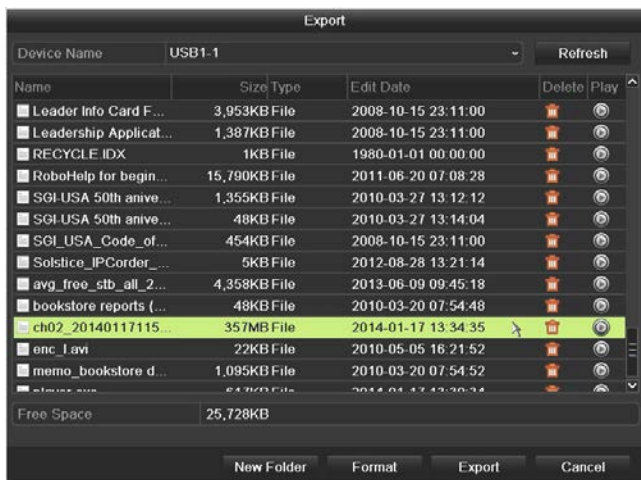


8. In the **Export** window, select the directory where you want to copy the files, or create a **New Folder**.
9. Click the **Export** button to start the **Export**. The Export window will list the files that were transferred. Allow the operation to finish before continuing.



10. Check the Export result by playing a file that was exported. In the Export window, click the file you want to play, then click the associated icon in the Play column.

SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP



Note: The Player utility player.exe will be exported automatically during video file export.

SECTION 6

Managing User Accounts

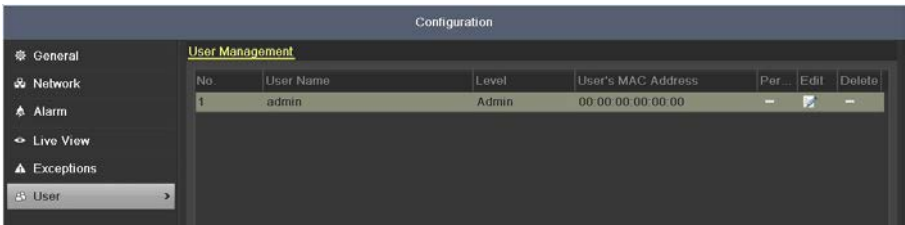
User accounts are created to control access to the system both at the NVR and when logging into the NVR from a remote computer. Each account has a User Name, Password, and a selection of permissions granted to the user.

By default, one user, named “admin”, is provided. The admin user is granted all permissions with the system, and can create, modify, and delete other users. User Name “**admin**”, is assigned the default password “**12345**”. To improve system security, it is strongly recommended that the default password be changed during the initial system setup.

The NVR supports up to 32 user accounts.

6.1 Adding a user account

1. Enter the User Management interface. Go to **Menu | Configuration | User**



2. Click **Add** to open the Add User menu.

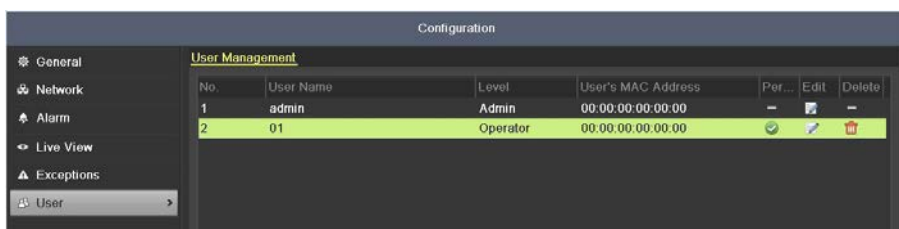
User Name	01
Password	*****
Confirm	*****
Level	Operator
User's MAC Address	00:00:00:00:00:00

Buttons: Apply, OK, Cancel

3. Enter the information for new user, including User Name, Password, Level and User's MAC Address.

SECTION 5: RECORD, PLAYBACK AND VIDEO BACKUP

- Set the user **Level** to Operator or Guest. Different **Levels** have different operating permission.
 - * **Operator**: The Operator user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration by default.
 - * **Guest**: The Guest user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration by default.
 - **User's MAC Address**: The MAC address of the remote PC which logs onto the NVR. If this option is configured and enabled, a remote user with this MAC address only can access the NVR.
4. Click the **OK** to save the settings and go back to the User Management interface. The added new user will be displayed on the list. See the screen shown below.



5. Select the user from the list and then click the button to enter the Permission settings (**Per** icon) interface. In the example above, user "01" was selected.



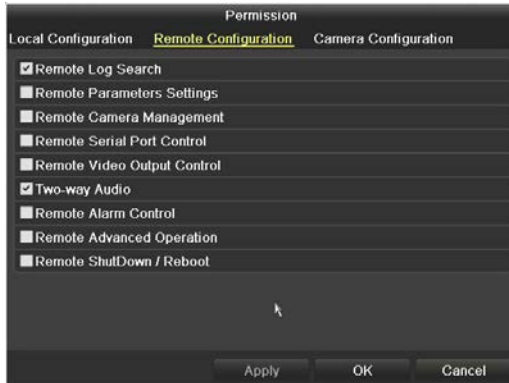
6. Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration options:

- **Local Log Search**: Searching and viewing logs and system information of NVR.
- **Local Parameters Settings**: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.

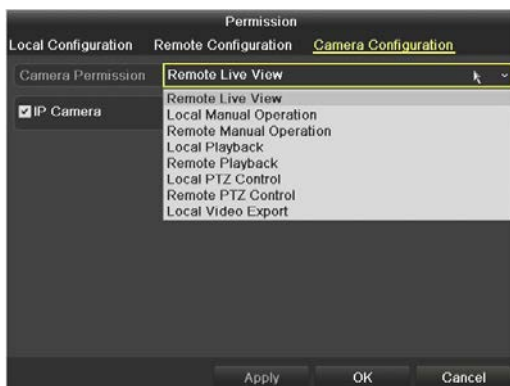
- **Local Camera Management:** Use for adding, deleting and editing of IP cameras.
- **Local Advanced Operation:** Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- **Local Shutdown Reboot:** Shutting down or rebooting the NVR.

Remote Configuration options



- **Remote Log Search:** Remotely viewing logs that are saved on the NVR.
- **Remote Parameters Settings:** Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- **Remote Camera Management:** Remote adding, deleting and editing of the IP cameras.
- **Remote Serial Port Control:** Reserved for future expansion.
- **Remote Video Output Control:** Sending remote button control signal.
- **Two-Way Audio:** Realizing two-way radio between the remote client and the NVR.
- **Remote Alarm Control:** Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- **Remote Advanced Operation:** Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- **Remote Shutdown/Reboot:** Remotely shutting down or rebooting the NVR.

Camera Configuration



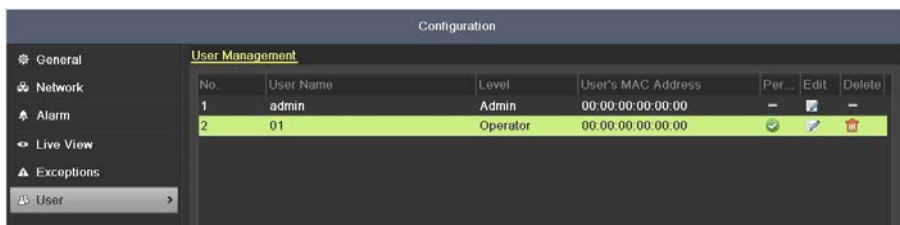
- **Remote Live View:** Remotely viewing live video of the selected camera(s).
- **Local Manual Operation:** Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera(s).
- **Remote Manual Operation:** Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera(s).
- **Local Playback:** Locally playing back recorded files of the selected camera(s).
- **Remote Playback:** Remotely playing back recorded files of the selected camera(s).
- **Local PTZ Control:** Locally controlling PTZ movement of the selected camera(s).
- **Remote PTZ Control:** Remotely controlling PTZ movement of the selected camera(s).
- **Local Video Export:** Locally exporting recorded files of the selected camera(s).

7. Click **OK** to save your settings and exit the User menus.

NOTE Only the admin user account has permission to restore the DVR to factory default settings.

6.2 Deleting a user account

1. Enter the User Management interface. Go to **Menu | Configuration | User**
2. Click the entry for the user to be deleted from the list. When the item is selected, it is highlighted.



- Click the **Delete** (trash can) icon to delete the selected user.

6.3 Editing a user account

- Enter the User Management interface. Go to **Menu | Configuration | User**
- Select the user to be edited from the list (see the **User Management** window above).
- Click the **Edit** icon to open the Edit User interface. **Note:** The user name **admin** can also be changed.

Add User	
User Name	01
Password	*****
Confirm	*****
Level	Operator
User's MAC Address	00 : 00 : 00 : 00 : 00 : 00
Apply OK Cancel	

SECTION 6: MANAGING USER ACCOUNTS

The screenshot shows the 'Edit User' menu for the 'admin' user. The fields are as follows:

Field	Value
User Name	admin
Old Password	****
Change Password	☒
Password	****
Confirm	****
User's MAC Address	

A virtual keyboard is displayed over the MAC Address field, and the 'Enter' key is highlighted. The 'OK' and 'Cancel' buttons are at the bottom.

admin user Edit User menu

4. Select and edit the menu options as needed:
 - **Operator and Guest:** You can edit the user information, including user name, password, permission level and MAC address. To change the password, check the **Change Password** box, then enter the new password in the Password and Confirm fields.
 - **Admin:** In the Edit User menu for the admin user, you can edit only password and MAC address. To change the password, check the **Change Password** box, enter the old (current) admin password, then enter the new password in the Password and Confirm fields.
5. Click **OK** to save the settings and exit the menu.

SECTION 7

Network Settings

7.1 Configuring General Settings

Network settings must be properly configured before you connect the NVR to cameras on network, or access it remotely.

1. Open the Network Settings menu. Go to **Menu | Configuration | Network**
2. Click the **General** tab.

The screenshot shows the 'Configuration' window with the 'General' tab selected. The left sidebar contains a menu with 'General' (selected), 'Network', 'Alarm', 'Live View', 'Exceptions', and 'User'. The main area displays the following settings:

Parameter	Value
NIC Type	10M/100M/1000M Self-adaptive
Enable DHCP	☐
IPv4 Address	192 . 168 . 75 . 74
IPv4 Subnet Mask	255 . 255 . 255 . 0
IPv4 Default Gateway	192 . 168 . 75 . 1
IPv6 Address 1	fe80::8ee7:48ff:fe12:a4e5/64
IPv6 Address 2	
IPv6 Default Gateway	
MAC Address	8c:e7:48:12:a4:e5
MTU(Bytes)	1500
Preferred DNS Server	
Alternate DNS Server	
Internal NIC IPv4 Address	192 . 168 . 1 . 1

At the bottom right, there are 'Apply' and 'Back' buttons.

3. In the General Settings menu, select or enter the following parameters: NIC Type, IPv4 Address, IPv4 Gateway, MTU (valid range is value range of MTU is 500 ~ 9676) and DNS Server IP addresses. If the DHCP server is available, check the Enable DHCP box to automatically obtain an IP address and other network settings from the network DNS server.
4. Enter the Internal NIC IPV4 Address, if necessary, to assign IP addresses to the cameras connected to the PoE interfaces.
5. Click **Apply** to save your settings.

7.2 Configuring Advanced Settings

7.2.1 Configuring DDNS

If your NVR is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access. Registration with your ISP is required before configuring the system to use DDNS.

1. Open the Network Settings menu. Go to **Menu | Configuration | Network**
2. Click the DDNS tab to open the DDNS Settings menu.

The screenshot shows the 'Configuration' window with the 'DDNS' tab selected. The 'Enable DDNS' checkbox is checked. The 'DDNS Type' dropdown is set to 'IPServer'. Other fields like 'Server Address', 'Device Domain Name', 'User Name', 'Password', and 'Confirm' are empty.

General	DDNS	NTP	Email	UPnP	More Settings
General	Enable DDNS				
Network	DDNS Type				
Alarm	Server Address				
Live View	Device Domain Name				
Exceptions	User Name				
User	Password				
	Confirm				

3. Check the **Enable DDNS** box to enable this feature.
4. Open the **DDNS Type** drop down list and select one of three options: IP Server, DynDNS, NO-IP.
 - **IP Server:** Enter Server Address for IP Server.

The screenshot shows the 'Configuration' window with the 'DDNS' tab selected. The 'Enable DDNS' checkbox is checked. The 'DDNS Type' dropdown menu is open, showing three options: 'IPServer', 'DynDNS', and 'NO-IP'. The 'IPServer' option is highlighted.

General	DDNS	NTP	Email	UPnP	More Settings
General	Enable DDNS				
Network	DDNS Type				
Alarm	Server Address				
Live View	Device Domain Name				
Exceptions	User Name				
User	Password				
	Confirm				

— DynDNS:

The screenshot shows the 'Configuration' window with the 'DDNS' tab selected. The 'Enable DDNS' checkbox is checked. The 'DDNS Type' dropdown menu is open, showing 'DynDNS' as the selected option. Other fields like 'Server Address', 'Device Domain Name', 'User Name', 'Password', and 'Confirm' are visible but empty.

- i. Enter Server Address for DynDNS (i.e. members.dyndns.org).
- ii. In the NVR Domain Name text field, enter the domain obtained from the DynDNS website.
- iii. Enter the User Name and Password registered in the DynDNS website.

— NO-IP: Enter the account information in the corresponding fields. Refer to the DynDNS settings.

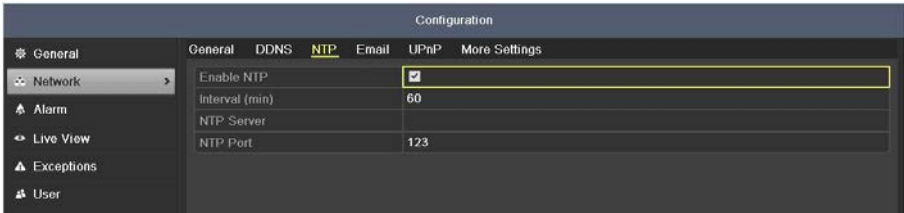
The screenshot shows the 'Configuration' window with the 'DDNS' tab selected. The 'Enable DDNS' checkbox is checked. The 'DDNS Type' dropdown menu is open, showing 'NO-IP' as the selected option. Other fields like 'Server Address', 'Device Domain Name', 'User Name', 'Password', and 'Confirm' are visible but empty.

- i. Enter Server Address for NO-IP.
- ii. In the NVR Domain Name text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
- iii. Enter the User Name and Password registered in the NO-IP website.

7.2.2 Configuring NTP Server

A Network Time Protocol (NTP) Server can be configured on your NVR to ensure the accuracy of system date/time.

1. Open the Network Settings menu. Go to **Menu | Configuration | Network**
2. Click the NTP tab to open the NTP Settings menu.

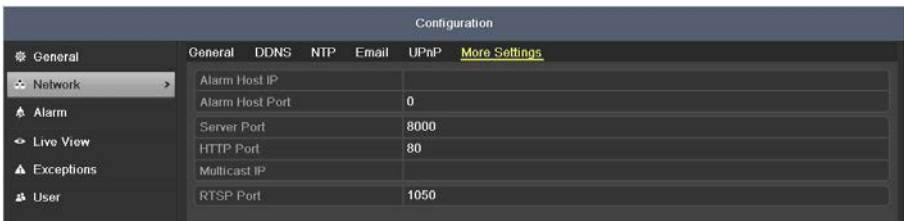


- Check the Enable NTP box to enable this feature.
- Select the following NTP settings:
 - Interval:** Interval in minutes between the two synchronizing actions with an NTP server.
NOTE: The synchronization time interval can be set from 1 to 10080 minutes. The default value is 60 min. If the NVR is connected to a public network, use an NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the NVR is setup in a customized network, NTP software can be used to establish a NTP server used for time synchronization.
 - NTP Server:** IP address of NTP server
 - NTP Port:** Port of NTP server
- Click **Apply** to save your settings and close the menu.

7.2.3 Configuring Remote Alarm Host

With a remote alarm host configured, the NVR will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the Network Video Surveillance software installed.

- Open the Network Settings menu. Go to **Menu | Configuration | Network**
- Click the More Settings tab to open the **More Settings** menu.



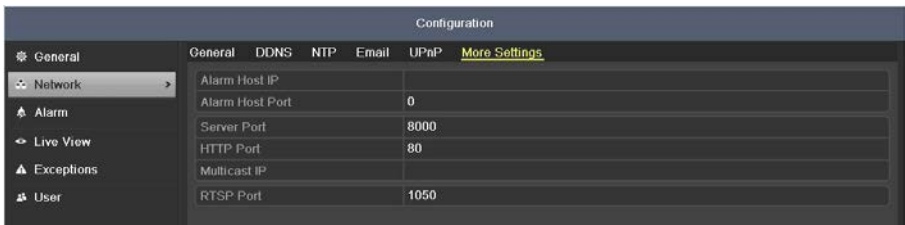
- Enter the Alarm Host IP address and Alarm Host Port in the appropriate fields. The Alarm Host IP address is the IP address of the remote PC on which Network Video Surveillance Software is installed. The Alarm Host Port must be the same as the alarm monitoring port configured in the software.

- Click **Apply** to save your settings and close the menu.

7.2.4 Configuring Multicast

Using the multicast function, more than 64 cameras are connectable. A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. We recommend that you use the IP address range from 239.252.0.0 to 239.255.255.255.

- Enter the Network Settings interface. Go to **Menu | Configuration | Network**
- Click the **More Settings** tab to open the **More Settings** menu.



- Set the Multicast IP address. When adding a device to the Network Video Surveillance Software, the multicast address must be the same as the NVR's multicast IP.



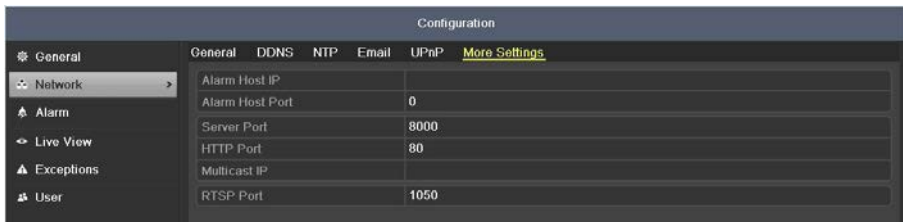
- Click **Apply** to save your settings and close the menu.

NOTE The multicast function must be supported by the network switch to which the NVR is connected.

7.2.5 Configuring RTSP

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in communication systems to control streaming media servers.

- Open the Network Settings menu. Go to **Menu | Configuration | Network**
- Click the **More Settings** tab to open the **More Settings** menu.

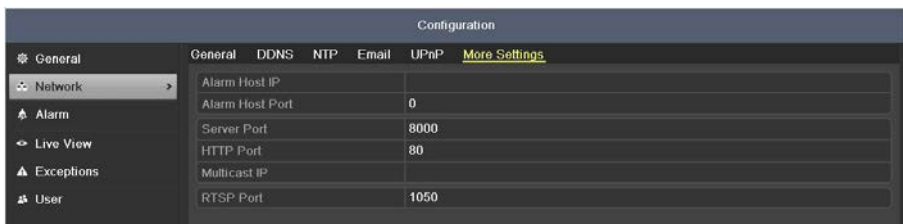


1. In the menu shown above, enter the RTSP port number. The default RTSP port is 1050.
4. Click **Apply** to save your settings and close the menu.

7.2.6 Configuring Server and HTTP Ports

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.

1. Open the Network Settings menu. Go to **Menu | Configuration | Network**
2. Click the **More Settings** tab to open the **More Settings** menu.



3. Enter a new Server Port number and HTTP Port number in the appropriate fields. The default Server Port is 8000 and the HTTP Port is 80.

Server Port	8000	I
HTTP Port	80	
Multicast IP	239.221.2.76	
RTSP Port	1050	

NOTE

The Server Port number must be in the range 2000..65535, it is used for remote client software access.
The HTTP port is used for remote IE access.

- Click **Apply** to save your settings and close the menu.

7.2.7 Configuring Email

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected or the administrator password is changed.

Before configuring the Email settings, the NVR must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

- Open the Network Settings menu. Go to **Menu | Configuration | Network**
- Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu.

The screenshot shows the 'Configuration' window with the 'General' tab selected. The left sidebar contains a tree view with 'General' expanded, showing 'Network', 'Alarm', 'Live View', 'Exceptions', and 'User'. The 'Network' settings are displayed in a table-like format.

Configuration					
General	DDNS	NTP	Email	UPnP	More Settings
NIC Type	10M/100M/1000M Self-adaptive				
Enable DHCP	☐				
IPv4 Address	192 . 168 . 75 . 74				
IPv4 Subnet Mask	255 . 255 . 255 . 0				
IPv4 Default Gateway	192 . 168 . 75 . 1				
IPv6 Address 1	fe80::3ee7:48ff:fe12:a4e5/64				
IPv6 Address 2					
IPv6 Default Gateway					
MAC Address	8c-e7-48-12-a4-e5				
MTU(Bytes)	1500				
Preferred DNS Server					
Alternate DNS Server					
Internal NIC IPv4 Address	192 . 168 . 1 . 1				

At the bottom right of the configuration window, there are two buttons: 'Apply' and 'Back'.

- Click **Apply** to save your settings and close the menu.
- Click the **Email** tab to open the email settings menu.

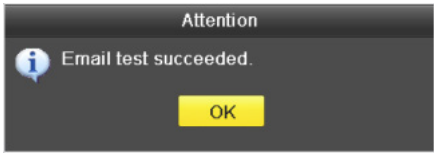
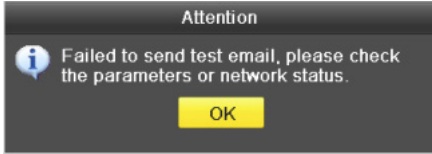
The screenshot shows the 'Configuration' window with the 'Email' tab selected. The left sidebar contains a tree view with 'Network' highlighted. The main configuration area lists various email settings, most of which are currently at default values or disabled. The 'SMTP Server' field is highlighted with a yellow border. At the bottom right, there are three buttons: 'Test', 'Apply', and 'Back'.

5. Configure the following Email settings:

- **Enable Server Authentication** (optional): Check the checkbox to enable the server authentication feature.
- **User Name**: The user account of sender's Email for SMTP server authentication.
- **Password**: The password of sender's Email for SMTP server authentication.
- **SMTP Server**: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).
- **SMTP Port No.:** The SMTP port. The default TCP/IP port used for SMTP is 25.
- **Enable SSL** (optional): Click the checkbox to enable SSL if required by the SMTP server.
- **Sender**: The name of sender.
- **Sender's Address**: The Email address of sender.
- **Select Receivers**: Select the receiver. Up to 3 receivers can be configured.
- **Receiver**: The name of user to be notified.
- **Receiver's Address**: The Email address of user to be notified.
- **Enable Attached Pictures**: Check the Enable Attached Picture box if you want to send email with attached alarm images. The interval is the time of two adjacent alarm images. You can also set SMTP port and enable SSL here.
- **Interval**: The interval refers to the time between two actions of sending attached pictures.
- **Test**: Click this button to send a test message to verify that the SMTP server can be reached.

6. Click **Apply** to save your settings.

7. Click the **Test** button to test your Email settings. The corresponding **Attention** message box will pop up.

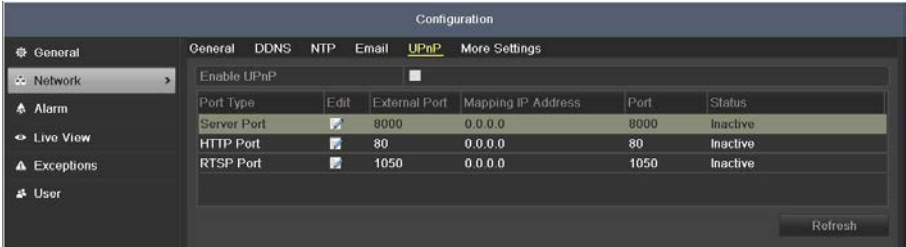


7.2.8 Configuring UPnP™

The Universal Plug and Play (UPnP™) feature allows the device to seamlessly discover other network devices and establish functional network services for data sharing, communications, etc. You can use the UPnP function to enable the fast connection of the device to the WAN via a router without port mapping.

If you want to enable the UPnP function of the device, you must enable the UPnP function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

1. Open the Network Settings menu. Go to **Menu | Configuration | Network**
2. Click the **UPnP** tab to open the UPnP™ menu.



3. Check the **Enable UPnP** box to enable UPnP.
4. In the UPnP menu, you can click the icon in the **Edit** column to change the External Port number associated with the Port Type. When finished, click **Refresh**, and then click **Apply** to save your settings.

SECTION 8

System Maintenance

The Maintenance menus provide several displays that report system device information, log information, and network traffic. Features also include the export and import of the system configuration file, firmware upgrade, and factory reset.

8.1 System Information

The System Information displays include status reports of the NVR, cameras, record settings, the network and the HDDs. The configuration settings shown on these displays can only be changed in other areas of the menu system.

1. To open the System Information displays, go to **Menu | Maintenance | System Information**:



The Device Info tab includes information about the NVR.

2. To view information about other parts of the system, click the appropriate tab.

8.2 Log Information

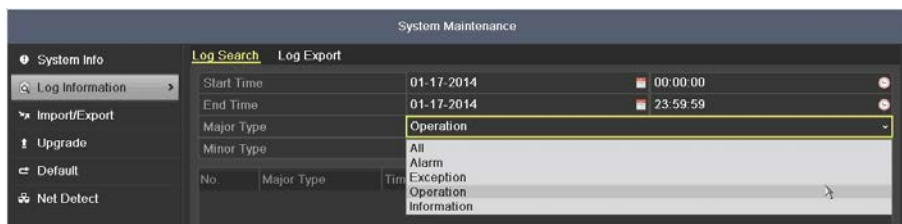
System log information is continuously generated and saved in log records. System logs include the following types of entries:

- **Alarms events** - Start/stop motion detection, start/stop tamper detection etc.
- **Exception conditions** - Video loss, illegal login, HDD full/error, IP camera disconnected, network disconnected, etc.
- **Information events** - Start/stop recording, local/network HDD information, HDD S.M.A.R.T., etc.
- **Operation events** - power on, login, local operation logout, etc.

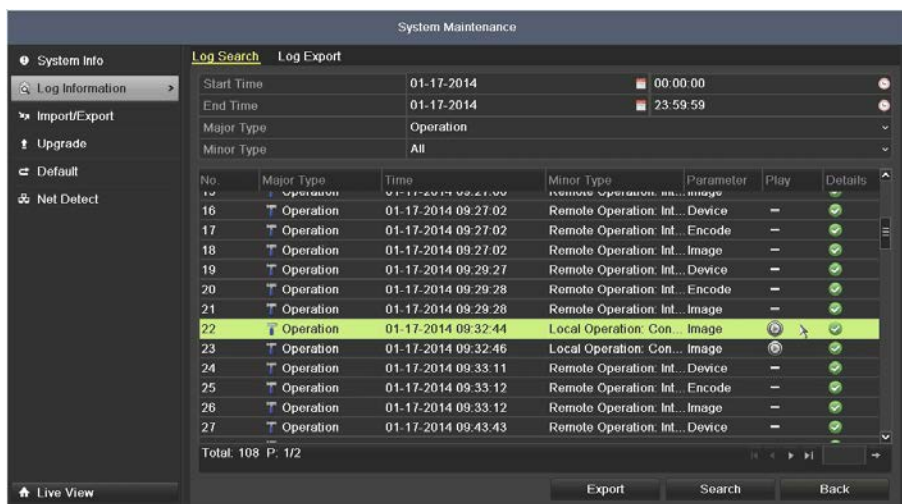
System logs can be searched and sorted for specific entries, and archived for use later. You can also search for video clips through system logs.

8.2.1 Log Search

1. Open the Log Information screen. Go to **Menu | Maintenance | Log Information**



2. Select a Start Time, End Time, Major Type and Minor Type. In the example below, the search criterion specified are "Operation" (Major Type) entries with "Local Operation: Configure Parameters" (Minor Type).
3. Click **Search**. If the search didn't find a file matching your search criteria, the message **No matched log file.** will appear.



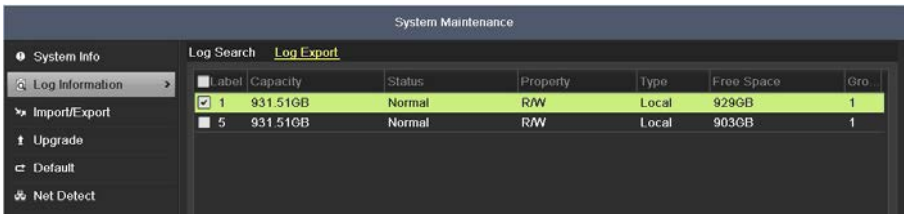
4. You can Export the result of the log search (click Export), choose a log entry with record file and click the playback button to play the file, or click the icon in the Details column to see more information about the entry. Click the icon in the **Details** column to see more information about the log entry.



8.2.2 Log Export

Log information can be exported to a backup device such as a USB storage device. The exported log file is in .txt format and readable with an ASCII text viewer such as Microsoft® Windows® Notepad or Wordpad. The filename, prefixed with the date and timestamp, in the format *YYYYMMDDHHMMSSlogBack.txt*. To export the log file:

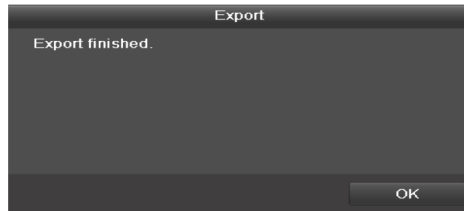
1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the NVR USB port.
2. Open the Log Information menu. Go to **Menu | Maintenance | Log Information**
3. Click the **Log Export** tab to display the NVR storage devices.



4. Check the select box for the storage devices that contain log information.
5. Click **Export**.



6. On the **Device Name** line, open the drop down list and select the destination for the file export.
7. Select the directory where you want to copy the files, or create a **New Folder**.
8. Click the **Export** button to start the **Export**. Allow the operation to finish before continuing.



9. Check the Export result on a computer by opening a file that was saved.

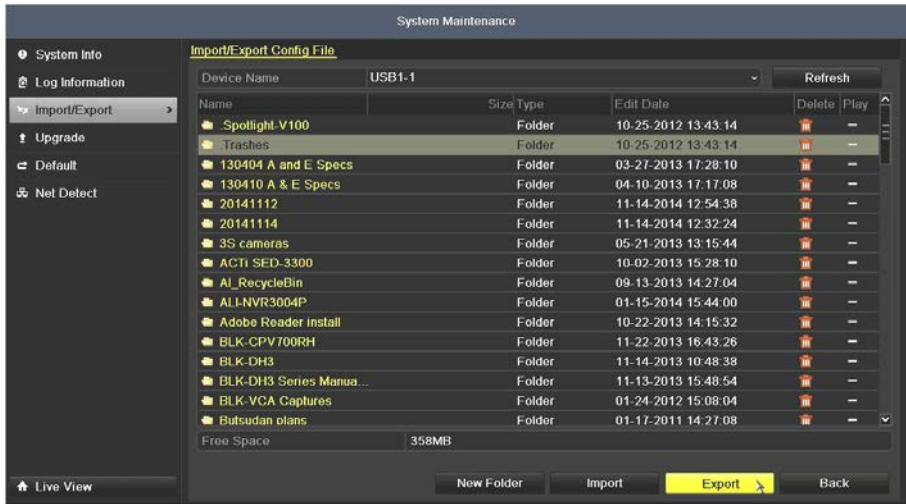
8.3 Import / Export system configuration

You can export the NVR configuration, then import the file later to restore the earlier configuration.

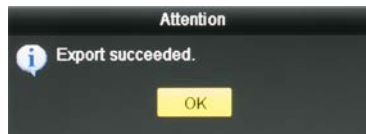
1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the NVR USB port.
2. Open the **Import/Export** menu. Go to **Menu | Maintenance | Import/Export**

Export configuration file

- On the **Device Name** line, open the drop down list and select the destination for the exported configuration file.



- Click the **Export** button to start the export. Allow the operation to finish before continuing. When the export operation is successful, an "Attention" "Export succeeded" pop-up window will open.



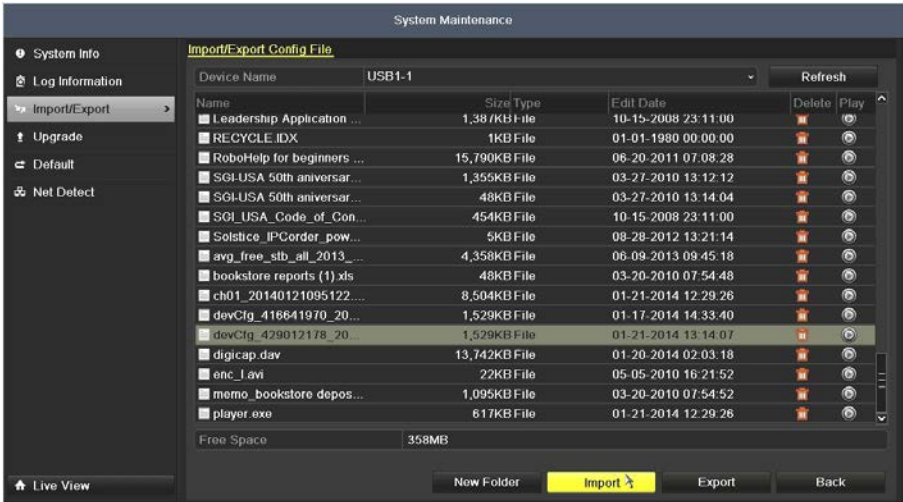
- Click **OK** to close the pop-up window.

NOTE: The configuration backup file is a binary file with a timestamp in the format `devCfg_<code>_YYYYMMDDHHMMSS.bin`

- Record the name of the exported file for future reference.

Import configuration file

- On the **Device Name** line, open the drop down list and select the destination of the exported configuration file. The configuration backup file is a binary file with a timestamp in the format `devCfg_<code>_YYYYMMDDHHMMSS.bin`



- In the file list of the USB device, highlight the NVR configuration file you want to load, and then click **Import**.
- Allow the NVR to fully reboot, then use it normally.

8.4 Upgrade Firmware

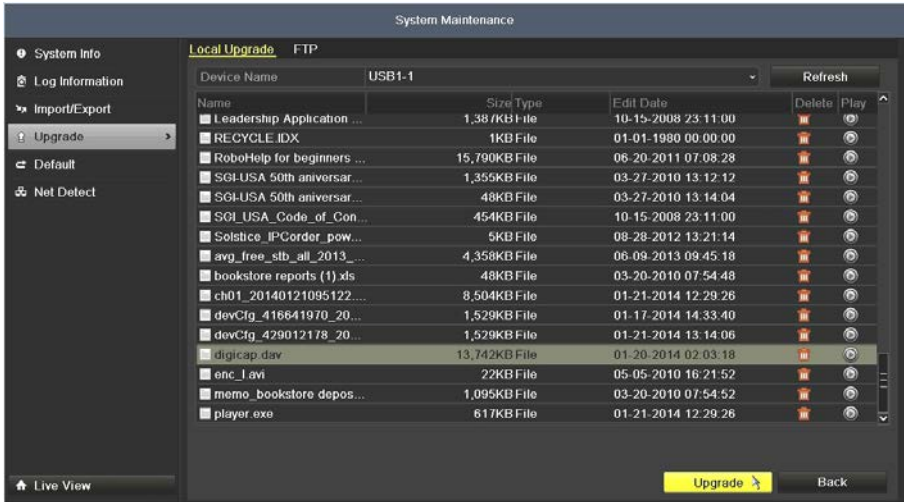
You can upgrade the firmware through a local device or remote FTP server. You should check the current Firmware version before upgrading your DVR firmware. Firmware upgrade should only be performed when recommended by your DVR support organization.

- To check the current firmware version, open the System information display. Go to **Menu | Maintenance | System Information**



- If the firmware needs to be upgraded, click the **Upgrade** tab on the left.

SECTION 8: SYSTEM MAINTENANCE



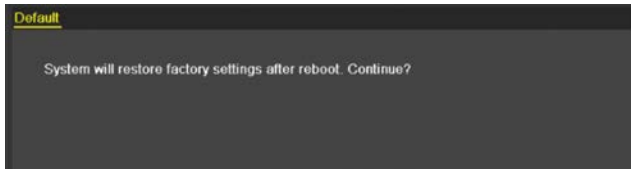
3. If installing firmware from a local device such as a USB flash drive or disk:
 - a. Connect the local device to the NVR, if necessary.
 - b. Open the **Device Name** drop down list and select the device that contains the firmware.
 - c. Click the firmware file you want to load.
 - d. Click the **Upgrade** button, then follow the on-screen instructions for completing the upgrade.
4. If installing firmware from a FTP server:
 - a. Click the FTP upgrade tab at the top of the menu.
 - b. Click the firmware file you want to load.
 - c. Click the **Upgrade** button, then follow the on-screen instructions for completing the upgrade.
5. Open the System Information screen and verify that the new firmware version is installed.

8.5 Default

The default option will reset the NVR to its factory settings. Except the network parameters (including IP address, subnet mask, gateway, MTU, NIC working mode, default route and server port), all other configuration parameters are restored to factory default settings.

To restore the factory default configuration:

1. Open the Log Information menu. Go to **Menu | Maintenance | Default**



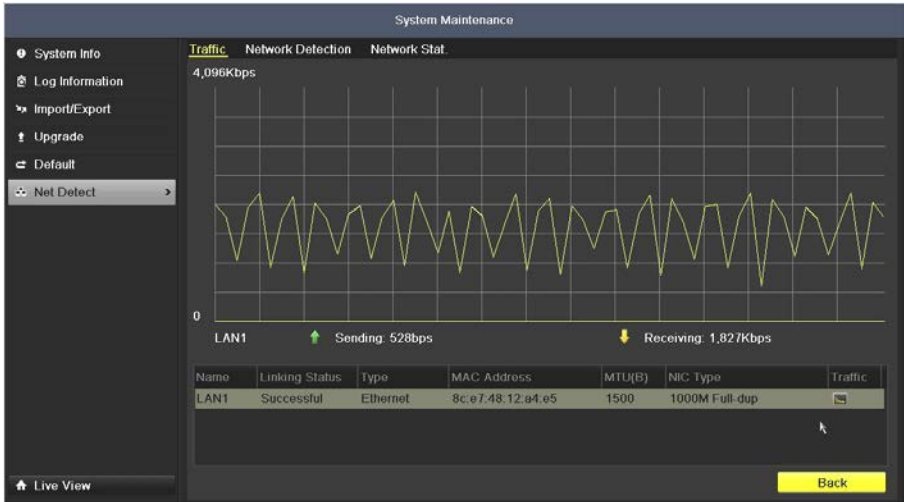
2. Click **OK**, then allow the NVR to reboot before continuing.

8.6 Net Detect

8.6.1 Checking Network Traffic

You can see real-time information of your NVR network traffic, such as linking status, MTU, sending/receiving rate, etc. The traffic data is refreshed every 1 second.

1. Open the Network Traffic menu. Go to **Menu | Maintenance | Net Detect**



8.6.2 Testing Network Delay and Packet Loss

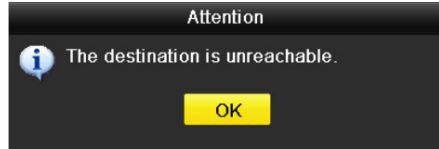
1. Open the Network Traffic menu. Go to **Menu | Maintenance | Net Detect**
2. Click the **Network Detection** tab to open the menu.

The screenshot shows the 'System Maintenance' window with the 'Network Detection' tab selected. The left sidebar contains a menu with options: System Info, Log Information, Import/Export, Upgrade, Default, and Net Detect (highlighted). The main area displays the 'Network Delay, Packet Loss Test' section. It includes a 'Select NIC' dropdown menu set to 'LAN1', a 'Destination Address' field containing '192.168.75.3', and a 'Test' button. Below this, the 'Network Packet Export' section shows a 'Device Name' dropdown set to 'USB1.1' and a 'Refresh' button. At the bottom, a table displays network statistics for LAN1.

Name	Linking Status	Type	MAC Address	MTU(B)	NIC Type	Traffic
LAN1	Successful	Ethernet	8c.e7.48.12.a4.e5	1500	1000M Full-dup	

A 'Back' button is located at the bottom right of the interface.

3. Enter the destination address in the Destination Address field.
4. Click the **Test** button to begin the test for network delay and packet loss. The testing result appear in the window. If the testing is failed, the error message box will open.

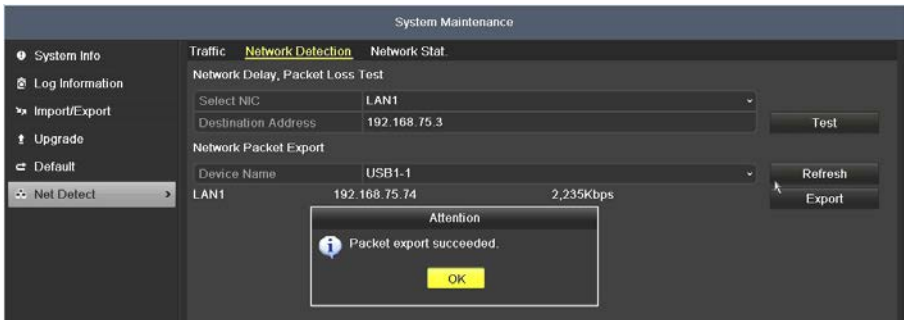


8.6.3 Exporting Network Packet

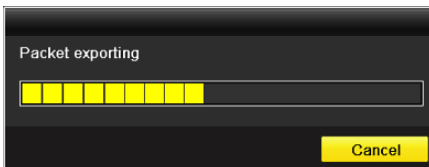
By connecting the NVR to network, the captured network data packet can be exported to a USB device such as a flash drive, HDD, DVD-R/W and other local USB backup devices.

1. Open the Network Traffic menu. Go to **Menu | Maintenance | Net Detect**
2. Click the **Network Detection** tab to open the Network Detection menu.
3. Select the backup device from the **Device Name** drop down list.

Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, verify that it is compatible with the NVR. Format the backup device if the format is incorrect.



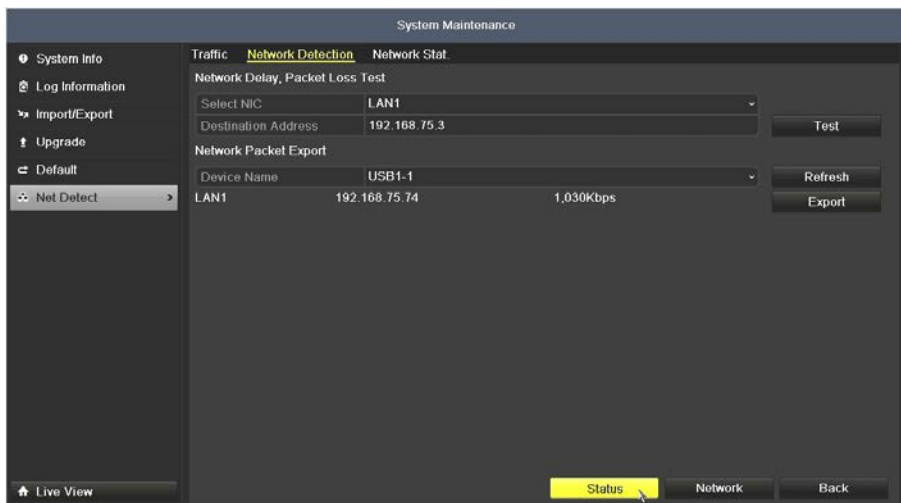
4. Click the **Export** button to start the export.
5. When the export is complete, click **OK**. Up to 1 M data can be exported during one operation.



8.6.4 Checking the network status

You can also check the network status and quickly set the network parameters.

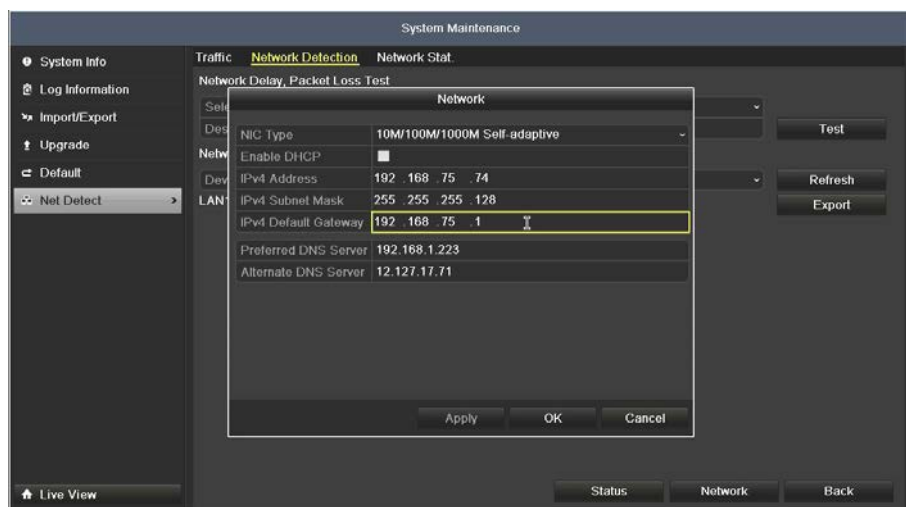
1. Open the Network Traffic menu. Go to **Menu | Maintenance | Net Detect**
2. Click the **Network Detection** tab to open the Network Detection menu.



3. Click the **Status** button in the lower right corner to report the status.



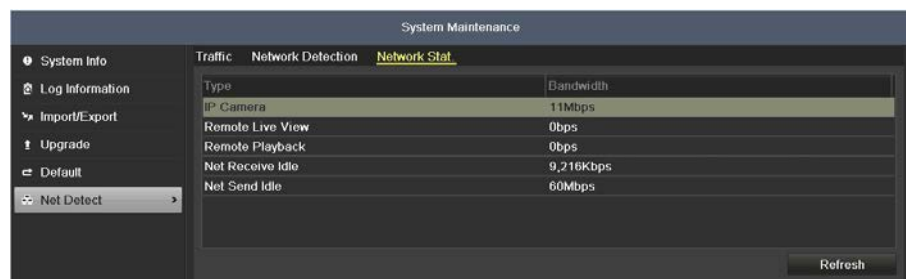
4. If the message box shows other information, click the **Network** button to open the **Network** parameters menu. After changing parameters, click **Apply**, and then click **OK** to save your settings.



8.6.5 Checking Network Statistics

Use the following procedure to view real time network status of your NVR.

1. Open the Network Traffic menu. Go to **Menu | Maintenance | Net Detect**
2. Click the **Network Stat.** tab to open the Network status report.



Use this display to check the bandwidth of the IP Camera, bandwidth of Remote Live View, bandwidth of Remote Playback, bandwidth of Net Receive Idle and bandwidth of Net Send Idle.

3. Click the **Refresh** button to show the current status.

SECTION 9

Remote Access

If you NVR is connected to a local network (LAN), you can access it from another computer on the LAN through Microsoft® Internet Explorer®. If using IE 10 or higher, you must configure it for “Compatibility” mode for the IP address you are logging into.

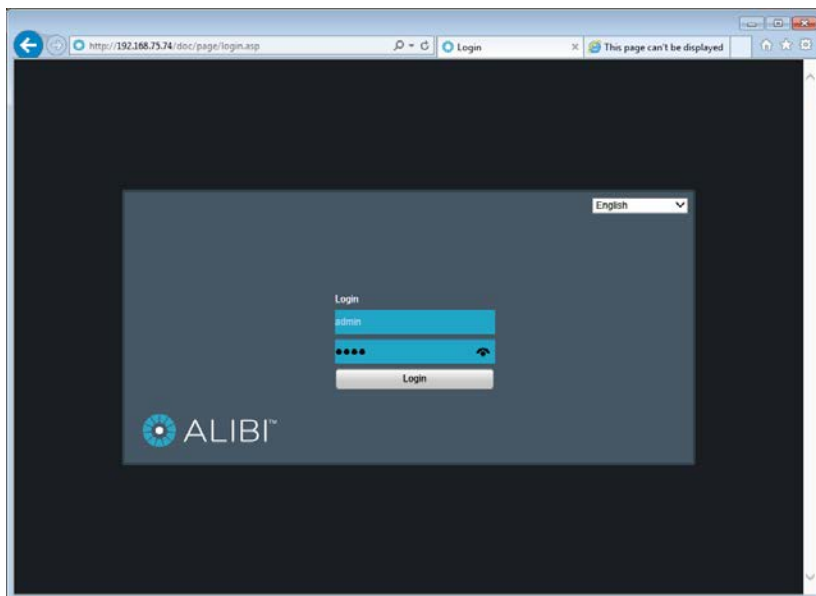
When connecting to the NVR, you must enter a User Name and Password. Note that some user permissions disallow remote access and/or features of this access method.

When logging into the NVR from a remote computer for the first time, you must install a plug-in program named WebComponents. The procedure for installing the program using Internet Explorer 11 is shown below. Subsequent log ins do not require you to reinstall WebComponents.

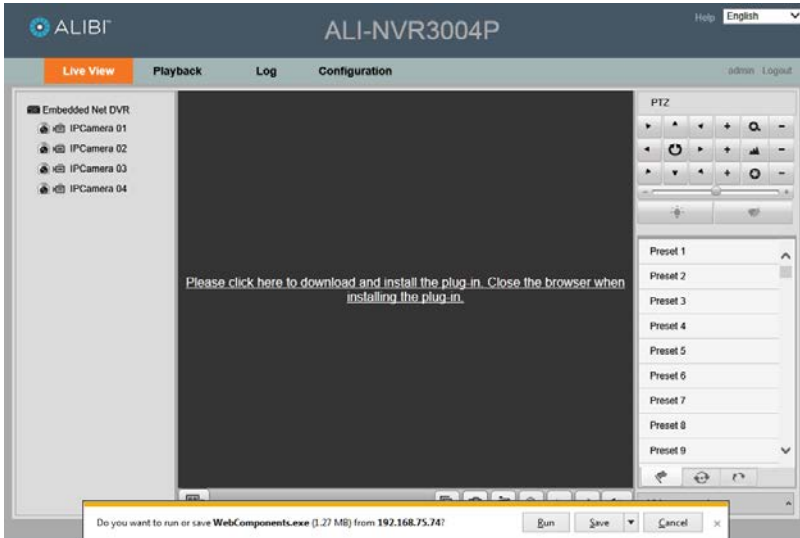
9.1 Remote login

To access the NVR from a computer on the LAN:

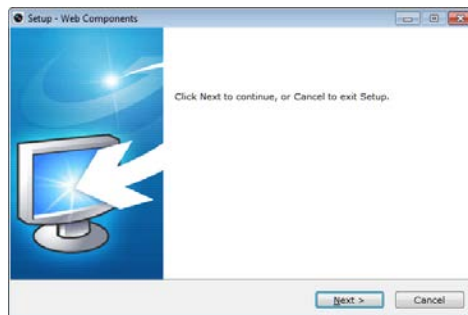
1. Open an Internet browser on your remote compute and enter the IP address of the NVR in the URL field. In the example below, the IP address of the NVR is 192.168.75.74.



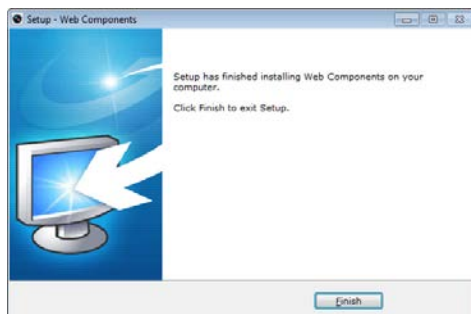
2. In the login window, enter your **User Name** and **Password** in the appropriate fields, then click **Login**. The default **User Name** and **Password** for the NVR is **admin** and **1111**.
3. If this login is the first login to the NVR from your computer and browser, continue with the following sub-steps:
 - a. After a successful login to the NVR, a message will appear in the middle of the Live View window requiring you to load a plug-in. Click on the message to continue, then click **Run** in the pop-up window at the bottom of the screen.



- b. In the **Setup - WebComponents** window opens, click **Next** to continue.



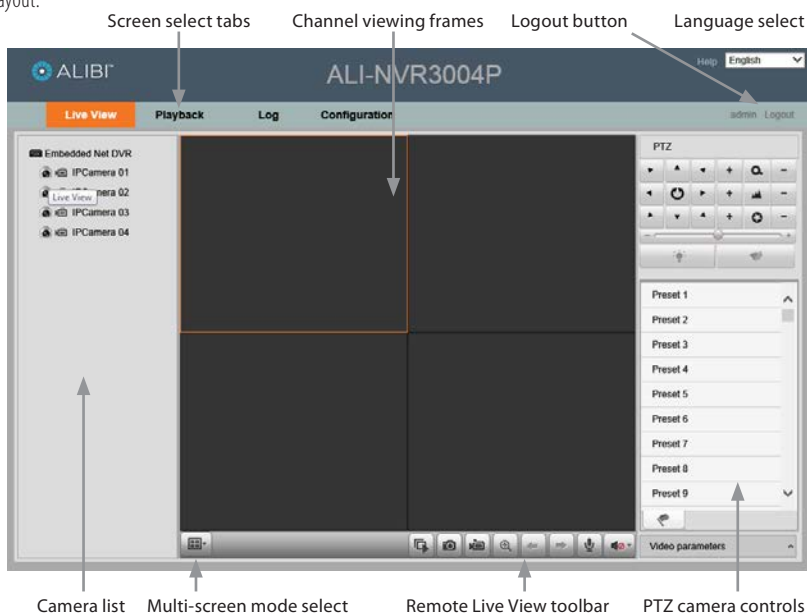
- c. Allow the plug-in installation to complete. When the following window appears, click **Finish**.



9.2 Remote Live View screen

The Live View window initially appears in a multi-screen configuration with no live view images shown. You can:

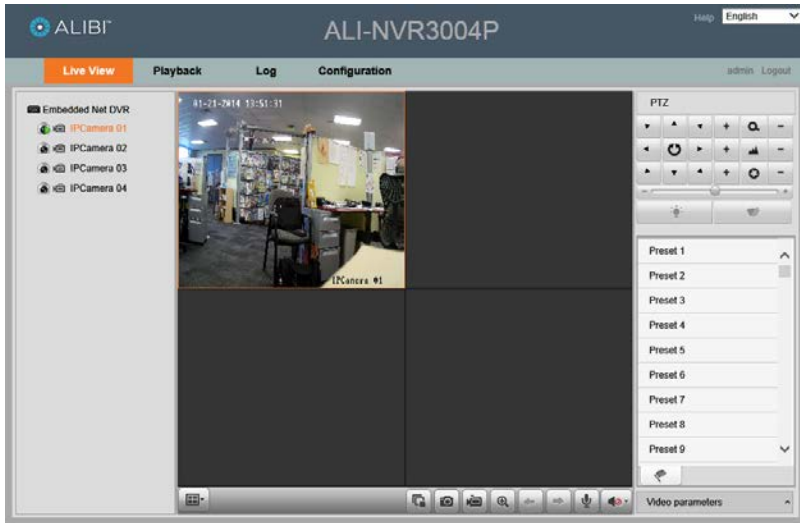
- Change the viewing screen layout by clicking the multi-screen select button and selecting the icon for a 1 screen or a 2 x 2 layout.



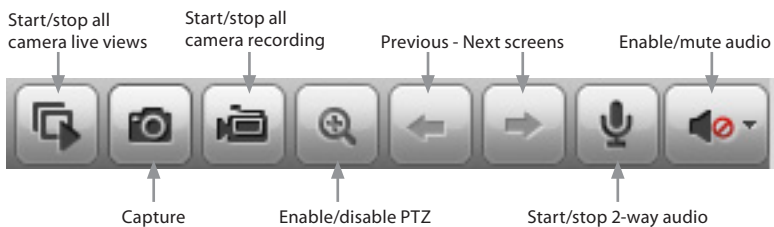
To view video from a camera in the Live View screen:

- Click a viewing frame to select it. When selected, the frame is surrounded by a bright box.

- Double click the camera channel you want to see.

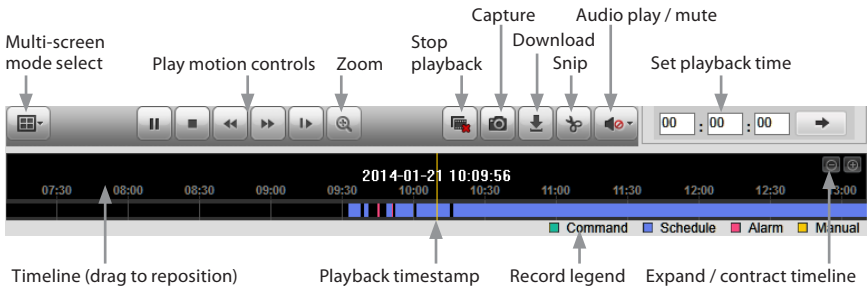


- To expand the image to full frame, double click the image in the viewing frame. To return to normal viewing mode, press **ESC** (keyboard escape key).
- You can control many Live View functions quickly with the Live View toolbar. The function of the toolbar icons are similar to those on the NVR channel viewing frame.



9.3 Remote Playback screen

Open the Playback screen by clicking **Playback** in the screen header. The Playback screen allows you to review video recorded from one camera or several cameras concurrently. Also, video can be downloaded to your local computer.



To playback recorded video:

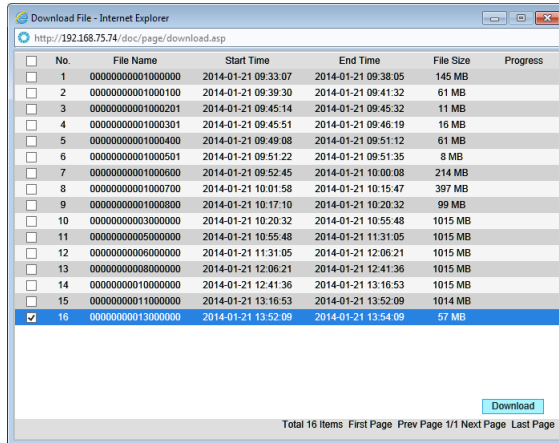
- Click the multi-screen mode button to select the number of viewing frames you need to display. You can select either a 1, 2 x 2, or 3 x 3 frame pattern.
- In the left frame, click the camera channel you want to play recorded video from. In the example above, *IPCamera 01* was selected.
- In the right frame, click the date when the video was recorded, then click the **Search** button. Note that in the example above, January 1, 2014 was selected.
- At the bottom of the screen, drag the timeline left or right to find when video was recorded for the camera selected. The condition that caused video to be recorded is indicated by a colored band on the timeline. The color legend is shown below.
- Click the **Play** button to begin playing video.

To Download recorded video:

NOTE

*The location where recorded video downloads and captures during playback are saved is shown on the **Configuration | Location Configuration** screen.*

- Click the **Download** icon.



- Check the box of the video segment you want to download.
- Click the **Download** button.

9.4 Remote Log screen

Open the Log screen by clicking **Log** in the screen header. The NVR log report is created by specifying a search criteria using the menu in the right frame (or using the default options), then clicking the **Search** button. The search criteria menu includes filters to search for Major and Minor type events, and specify the start and end time of the report.

	Time	Major Type	Minor Type	Channel No.	Local/Remote User	Remote Host IP
1	2014-01-21 00:42:26	Information	S.M.A.R.T. Information	1		0.0.0.0
2	2014-01-21 01:42:29	Information	S.M.A.R.T. Information	1		0.0.0.0
3	2014-01-21 02:42:32	Information	S.M.A.R.T. Information	1		0.0.0.0
4	2014-01-21 03:42:34	Information	S.M.A.R.T. Information	1		0.0.0.0
5	2014-01-21 04:42:36	Information	S.M.A.R.T. Information	1		0.0.0.0
6	2014-01-21 05:42:39	Information	S.M.A.R.T. Information	1		0.0.0.0
7	2014-01-21 06:42:41	Information	S.M.A.R.T. Information	1		0.0.0.0
8	2014-01-21 07:42:43	Information	S.M.A.R.T. Information	1		0.0.0.0
9	2014-01-21 08:42:45	Information	S.M.A.R.T. Information	1		0.0.0.0
10	2014-01-21 09:23:46	Operation	Local: Abnormal Shutdown			0.0.0.0
11	2014-01-21 09:30:45	Operation	Power On			0.0.0.0
12	2014-01-21 09:30:45	Operation	Local Login		admin	0.0.0.0
13	2014-01-21 09:30:46	Operation	Local Add IP Camera			0.0.0.0
14	2014-01-21 09:30:50	Information	Start Recording	D2		0.0.0.0
15	2014-01-21 09:31:05	Exception	IP Camera Disconnect			0.0.0.0
16	2014-01-21 09:31:05	Exception	IP Camera Disconnect			0.0.0.0
17	2014-01-21 09:31:05	Exception	IP Camera Disconnect			0.0.0.0
18	2014-01-21 09:31:23	Alarm	Start Motion Detection	D2		0.0.0.0
19	2014-01-21 09:31:23	Operation	Local: Abnormal			0.0.0.0

Total 411 Items First Page Prev Page 1/5 Next Page Last Page

Log reports can be saved in either text or Excel formats by clicking the **Save Log** icon.

9.5 Remote Configuration screen

Open the Configuration screen by clicking **Configuration** in the screen header. The Configuration menu enables you to view the NVR configuration and make configuration changes. The User Name you use to login to the NVR must have administrative privileges to change the NVR configuration.

Options in the configuration menu are identical to those in the embedded NVR **Menu** system. For more information on how to use these options, refer to the NVR **Menu** descriptions in previous sections of this manual. After making configuration changes click **Save** to apply your changes.

ALIBI ALI-NVR3004P

Help English

Live View Playback Log **Configuration** admin Logout

Configuration

- Local Configuration
- Remote Configuration
 - Device Parameters
 - Device Information**
 - Time Settings
 - Camera Settings
 - Network Settings
 - Alarm Settings
 - Exception
 - User Management
 - HDD Management
 - Maintenance
 - Camera Management

Basic Information

Device Name: Embedded Net DVR

Device No.: 255

Model: ALI-NVR3004P

Serial No.: ALI-NVR3004P042013000100R0142901217BWCVU

Firmware Version: V2.2.3 build 140120

Encoding Version: V1.0 build 121110

Number of Channels: 4

Number of HDDs: 1

Number of Alarm Input: 1

Number of Alarm Output: 1

Save

The location of local files is defined on the **Configuration | Local Configuration** screen.

ALIBI ALI-NVR3004P

Help English

Live View Playback Log **Configuration** admin Logout

Configuration

- Local Configuration**
- Remote Configuration
 - Device Parameters
 - Device Information
 - Time Settings
 - Camera Settings
 - Network Settings
 - Alarm Settings
 - Exception
 - User Management
 - HDD Management
 - Maintenance
 - Camera Management

Local Configuration

Protocol: TCP

Stream Type: Main Stream

Image Size: Auto fill

Record File Size: 512M

Live View Performance: Balanced

Save record files to: C:\Users\Digip\Web\RecordFiles Browse

Save snapshots in live view to: C:\Users\Digip\Web\CaptureFiles Browse

Save snapshots when playback to: C:\Users\Digip\Web\PlaybackFiles Browse

Save clips to: C:\Users\Digip\Web\PlaybackFiles Browse

Save downloaded files to: C:\Users\Digip\Web\DownloadFiles Browse

Save

SECTION 10

Cleaning

Clean the camera lens and IR lamp shield with a mild glass cleaning solution and a lint free cloth.

- Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.
- Dust can be removed from equipment by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.



Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surfaces. Before using any chemical product, read the instructions carefully.

SECTION 11

Specifications

Model	ALI-NVR3004P	ALI-NVR3008P
Number of Channels Supported	4	8
Compression Format	H.264	
Recording Performance	20 Mbps max	40 Mbps max
Remote Viewing Output Capacity	60 Mbps max	80 Mbps max
Recording Type	Continuous, Schedule, Motion Detection	
Supported IP Camera Resolution	5MP / 3MP / 1080p / UXGA / 720p / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF	
Supported Playback Resolution	5MP / 3MP / 1080p / UXGA / 720p / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF	
Synchronous Playback	4-ch, 720P / 2-ch, 1080P / 1-ch, 5MP	8-ch, 4CIF / 4-ch, 720P / 2-ch, 1080P / 1-ch, 5MP
Video Output	VGA, HDMI	
Video Output Formats	1 channel, resolution: 1920 × 1080P / 60 Hz, 1600 × 1200 / 60 Hz, 1280×1024 / 60 Hz,	
Export Formats	.MP4	
Ethernet	1x Gigabit RJ-45 self-adaptive Ethernet interface, 4 independent 10 /100 Mbps PoE Ethernet interfaces	1x Gigabit RJ-45 self-adaptive Ethernet interface, 8 independent 10 /100 Mbps PoE Ethernet interfaces
USB	2x USB 2.0	
Hard Disk Drive (HDD) Interface	2x SATA	
HDD Capacity	2x HDDs max., up to 4TB capacity per HDD	
Operating System	Embedded Linux	
Security	Password Protection	
Protocols	IPv4, TCP/IP, UDP, HTTP, UPnP, RTSP / RTP / RTCP, SMTP, FTP, DHCP, NTP, DNS, ONVIF, HTTP multipart	
Power Requirements	110 ~ 240 Vac	
Power Consumption	3A	
Weight	5.5 lbs. (without HDD)	
Dimensions (h × w × d)	1.77" × 17.52" × 11.42"	
Operating Temperature	14 °F ~ 131 °F (-10 °C ~ +55 °C)	
Color / Material	Black, Gray	
Material	Aluminum	
Approvals	CE, FCC, RoHS	
Remote Client System Requirements		
Operating System	Microsoft Windows 2000, 2003, XP, Vista, 7, 8 (32-bit and 64-bit version) / Linux 2.6+ / Apple MacOS X 10.5 (Intel x86 only), 10.6 and 10.7	
Web Browser	Microsoft Internet Explorer 8.0, 9.0, and 10 (32-bit version), Mozilla Firefox 3.6, 13 and higher	
Software Requirements	WebComponent plug-in installation	
Mobile Client OS Platform	iOS, Android (Alibi Witness)	

APPENDIX A Glossary

Dual Stream: Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the NVR, with the main stream having a maximum resolution of 4CIF and the sub-stream having a maximum resolution of CIF.

HDD: Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.

DHCP: Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.

HTTP: Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network

DDNS: Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.

NTP: Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.

NVR: Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.

PTZ: Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.

USB: Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

APPENDIX B **FAQ**

Q Why does my NVR make a beeping sound after booting?

A The possible reasons for the warning beep are:

- a. There is no HDD installed in the NVR.
- b. The HDD is not initialized.
- c. HDD error

To cancel the beeping sound and use the NVR without HDD, open the **Configuration | Exception** menu and de-select the Audible Warning.

Q Why does the NVR seem unresponsive when operating with the IR remote control?

A Please read through the section Using the IR Remote Control, then check:

- a. Nothing is blocking the IR sensor on the front of the NVR.
- b. The batteries are installed correctly in the remote, making sure that the polarities of the batteries are not reversed.
- c. The battery power is not depleted.
- d. The remote has not been tampered with.
- e. There are no fluorescent lamps in use nearby.

Q Why does the PTZ seem unresponsive?

A The RS-485 interface and PTZ controls are not supported on this NVR.

Q Why is there no video recorded after setting the motion detection?

A If there are no recorded video after setting the motion detection, please check the guidelines in Chapter 5.

- a. The recording schedule is setup correctly. See **Menu | Record | Schedule**.
- b. The motion detection area is configured correctly. See **Menu | Cameras | Motion**.
- c. The channels are being triggered for motion detection. See **Menu | Cameras | Motion**, check the Enable Motion Detection option, the Sensitivity setting, motion detection zones.

Q Why doesn't the NVR detect my USB export device for exporting recorded files?

A There's a chance that the NVR and your USB device is not compatible. Please refer to our company's website to view a list of compatible devices.

APPENDIX C HDD Installation

The following procedures illustrate hard disk drive (HDD) installation in a ALI-NVR3000P series NVR without an HDD, and installation of a second HDD. If you purchased your NVR without a HDD, or you want to replace the HDD installed in your NVR, use this procedure as a guideline.

C.1 NVR compatible HDDs

For the best performance of your system, install only a high-reliability security grade HDD. Security grade HDDs are designed to stream video efficiently.

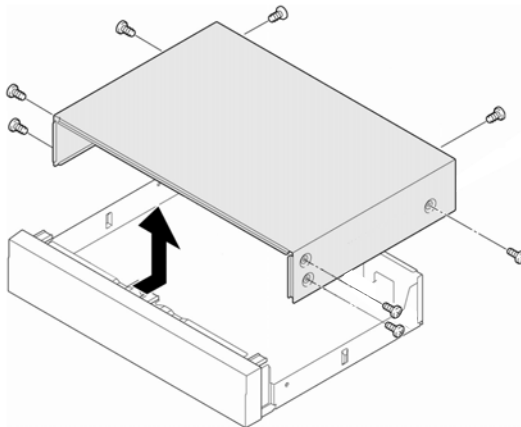
C.2 Initial HDD Installation

The NVR will accommodate one or two internal HDDs. The HDD attaches to the chassis with four screws inserted up through the underside of the chassis. The HDD mounting screws and HDD cables are provided with your HDD.

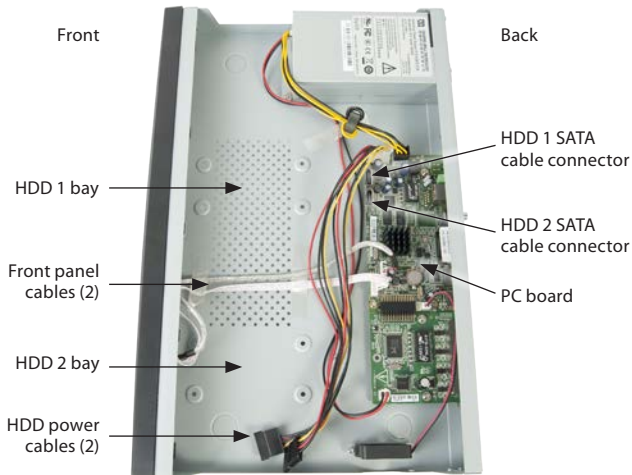


Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the HDD in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing and avoid touching electronic components.

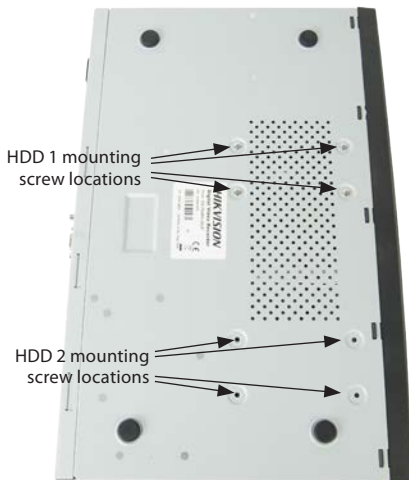
1. Power off the NVR, if necessary, then disconnect the power cord from the back of the NVR.
2. Remove the top cover from the NVR by removing the two cover screws on the back of the chassis, and the three on each side. See the drawing below.



3. Orient the chassis as shown in the picture below. Become familiar with the locations of the items identified in the picture.



4. The photos below shows the locations of the HDD mounting screws for HDD 1 (initial HDD) and HDD 2 (second HDD). Also shown are the SATA and Power cable connectors on the HDD.



5. Flip the chassis top up.

APPENDIX C: HDD INSTALLATION



Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the HDD in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing and avoid touching electronic components.

6. For the initial HDD, attach a SATA cable and a power cable to the connectors on the HDD, then attach the other end of the SATA cable to the HDD 1 SATA cable connector on the PC board.
7. Set the HDD in place in the chassis as shown below. Try to align the mounting screw holes on the underside of the HDD with the screw holes in the bottom of the chassis.



8. While holding the HDD in place carefully turn over the HDD together with the chassis and install the four HDD mounting screws provided to secure the HDD in place. Tighten the screws until snug. Be careful not to overtighten the screws.
9. Turn the chassis top side up and check to make sure the HDD cables connectors are seated properly at both ends.
10. If you are installing a second HDD, continue with the procedure in “C.3 Second HDD installation” on page 124.
11. Reinstall the NVR cover.

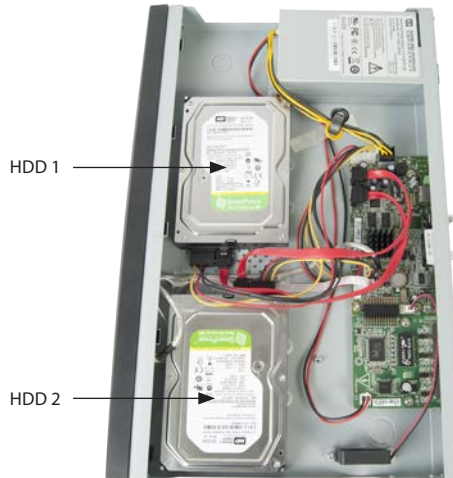
C.3 Second HDD installation

Installing a second HDD in the chassis is very similar to installation of the first HDD. The differences include the location where the HDD is secured, SATA cable connection on the PC board, and concern about the routing of the front panel cables. If you didn't install the initial HDD in the chassis, become familiar with the procedure in “C.2 Initial HDD Installation” on page 122.



Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the HDD in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing and avoid touching electronic components.

1. Remove the HDD cover, if installed.
2. Attach a SATA cable and a power cable to the connectors on the HDD, then attach the other end of the SATA cable to the HDD 2 SATA cable connector on the PC board.
3. Set the HDD in place in the chassis as shown below. Try to align the mounting screw holes on the underside of the HDD with the screw holes in the bottom of the chassis.



If the HDD covers the front panel cables, reposition those cables so that they are not crushed when the HDD is secured to the chassis. Note that in the photos above, the front panel cables were rerouted.

4. While holding the HDD in place carefully turn over the HDD together with the chassis and install the four HDD mounting screws provided to secure the HDD in place. Tighten the screws until snug. Be careful not to overtighten the screws.
5. Turn the chassis top side up and check to make sure the HDD cables connectors are seated properly at both ends.
6. Reinstall the NVR cover.

APPENDIX D NVR Compatible Cameras

Following is a list of IP cameras shown to be compatible with your NVR. Other cameras not listed here may also compatible. Consult with your technical support organization for more information.

NOTE **ONVIF compatibility** refers to the camera can be supported both when it uses the ONVIF protocol and its private protocols. **Only ONVIF** is supported refers to the camera can only be supported when it uses the ONVIF protocol.

IPC Manufacturer or Protocol	Model	Version	Max. Resolution	Sub-stream	Audio
ACTI®	TCM4301-10D-X-00083	A1D-310-V4.12.09-AC	1280×1024	×	√
	TCM5311-11D-X-00023	A1D-310-V4.12.09-AC	1280×960	×	√
Alibi™	ALI-IPV3013R	V5.1.0 build 140120 or newer	1280×960	√	×
	ALI-IPV3030R	V5.1.0 build 140120 or newer	2048×1536	√	×
	ALI-IPU3013R	V5.1.0 build 140120 or newer	1280×960	√	×
	ALI-IPU3030R	V5.1.0 build 140120 or newer	2048×1536	√	×
Arecont®	AV1305M	65175	1280×1024	√	×
	AV2155	65143	1600×1200	√	×
	AV2815	65220	1920×1080	√	×
	AV3105M	65175	1920×1080	√	×
	AV5105	65175	1920×1080	√	×
Axis™	M1114	5.09.1	1024×640	√	×
	M3011 (ONVIF compatibility)	5.21	704×576	√	×
	M3014 (ONVIF compatibility)	5.21.1	1280×800	√	×
	P3301 (ONVIF compatibility)	5.11.2	768×576	√	√
	P3304 (ONVIF compatibility)	5.20	1440×900	√	√
	P3343 (ONVIF compatibility)	5.20.1	800×600	×	√
	P3344 (ONVIF compatibility)	5.20.1	1440×900	√	√
	P5532	5.15	720×576	√	×
Canon®	Q7404	5.02	720×576	√	√
	VB-M400	Ver.+1.0.0	1920×960	×	√
	VB-M6000D	Ver.+1.0.0	1920×960	×	×
	VB-M7000F	Ver.+1.0.0	1920×960	×	√

APPENDIX D: NVR COMPATIBLE CAMERAS

IPC Manufacturer or Protocol	Model	Version	Max. Resolution	Sub-stream	Audio
Hikvision®	DS-2CD883F-E	V4.0.1 build 120508	2560×1920	√	√
	DS-2CD886BF-E	V4.0.3 build 120913	2560×1920	√	√
	DS-2CD886MF-E	V4.0.3 build 120913	2560×1920	√	√
	DS-2CD8283F-E(I)	V3.0 build110921	2560×1920	√	√
	DS-2CD854F-E	V4.0.1 build 120508	2048×1536	√	√
	DS-2CD754F-E(I)	V4.0.1 build 120508	2048×1536	√	√
	DS-2CD8254F-E(I)	V4.0.1 build 120508	2048×1536	√	√
	DS-2CD754FWD-E	V4.0.1 build 120508	1920×1080	√	√
	DS-2CD753F-E(I)	V4.0.1 build 120508	1600×1200	√	√
	DS-2CD853F-E	V4.0.1 build 120508	1600×1200	√	√
	DS-2CD8153F-E	V4.0.1 build 120508	1600×1200	√	√
	DS-2CD8253F-E(I)	V4.0.1 build 120508	1600×1200	√	√
	DS-2CD7153-E	V4.0.1 build 120508	1600×1200	√	×
	DS-2CD876BF-E	V4.0.3 build 120913	1600×1200	√	√
	DS-2CD876MF-E	V4.0.3 build 120913	1600×1200	√	√
	DS-2CD877BF	V4.0.3 build 120913	1920×1080	√	√
	DS-2CD752MF-E DS-2CD852MF-E DS-2CD852F-E	V2.0 build 110614 V2.0 build 110426 V2.0 build 100521	1600×1200	√	√
	DS-2CD862MF-E	V2.0 build 110614 V2.0 build 110426 V2.0 build 100521	1280×960	√	√
	DS-2CD8464F-EI	V4.0.1 build 120508	1280×960	√	√
	DS-2CD863PF/NF-E	V4.0.1 build 120508	1280×960	√	√
	DS-2CD864FWD-E	V4.0.1 build 120508	1280×720	√	√
	DS-2CD763PF/NF-E	V4.0.1 build 120508	1280×960	√	√
	DS-2CD763NF-EI	V4.0.1 build 120508	1280×960	√	√
	DS-2CD2012-I	v4.0.8 build 121109	1280×960	√	×
	DS-2CD7133-E	V4.0.1 build 120508	640×480	√	×
	DS-2CD733F-E(I)	V4.0.1 build 120508	640×480	√	√
	DS-2CD833F-E	V4.0.1 build 120508	640×480	√	√
	DS-2CD8133F-E	V4.0.1 build 120508	640×480	√	√

APPENDIX D: NVR COMPATIBLE CAMERAS

IPC Manufacturer or Protocol	Model	Version	Max. Resolution	Sub-stream	Audio
Hikvision® (cont.)	DS-2CD802NF DS-2CD812PF DS-2CD832F DS-2CD892PF/NF	V2.0 build 090522 V2.0 build 090715 V2.0 build 110301	704×576	√	√
	DS-2CD893PF(WD)-E	V4.0.1 build 120508	704×576	√	√
	DS-2CD793PF(WD)-E(I)	V4.0.1 build 120508	704×576	√	√
	DS-2CD793NF(WD)-E(I)	V4.0.1 build 120508	704×576	√	√
	DS-2CD8313PF-E40	V3.0 build 110812	352×288	√	√
	DS-2CD966(B) DS-2CD966-V(B)	V3.1.0 build 120423	1360×1024	×	×
	DS-2CD976(B) DS-2CD976-V(B)	V3.1.0 build 120423	1600×1200	×	×
	DS-2CD976(C)	V3.1.0 build 120423	1600×1200	×	×
	DS-2CD976-V(C)	V3.1.0 build 120423	1600×1200	×	×
	DS-2CD977(B) DS-2CD977(C)	V3.1 build 120423	1920×1080	×	×
	DS-2CD986A(B)	V3.1.0 build 120423	2448×2048	×	×
	DS-2CD986A(C)	V3.1.0 build 120423	2448×2048	×	×
	DS-2CD986C(B)	V2.3.6 build 120401	2560×1920	×	×
	DS-2DF1-572	V4.0.2 build 120813	1280×720	√	√
	DS-2DF1-57A	V4.0.2 build 120813	1280×720	√	√
	DS-2DF1-618H	V2.0.1 build 110520 V3.0.1 build 110811	704×576	√	√
	DS-2DF1-718	V2.0.1 build 110520 V3.0.1 build 110811	704×576	√	√
	DS-2DF1-518	V2.0.1 build 110520 V3.0.1 build 110811	704×576	√	√
	DS-6601HFHI	V1.0.3 build 121024	1920×1080	√	√
	DS-6601HFHI/L	V1.0.3 build 121024	1920×1080	√	√
	DS-6501HCI-SATA DS-6504HCI-SATA DS-6516HCI-SATA	V1.0.1 build 110104	704×576	×	√
	DS-6508HFI-SATA	V1.0.1 build 110104	704×576	×	√
	DS-6601HCI DS-6602HCI DS-6604HCI	V1.2.0 build 120215	704×576	×	√
	DS-6601HFI DS-6602HFI DS-6604HFI	V1.2.0 build 120215	704×576	×	√

APPENDIX D: NVR COMPATIBLE CAMERAS

IPC Manufacturer or Protocol	Model	Version	Max. Resolution	Sub-stream	Audio
Panasonic®	WV-SF336H	Application:1.06 Image data:1.06	1280×960	√	√
	WV-SP306H	Application:1.34 Image data:1.06	1280×960	√	√
Pelco®	D5118	1.8.2-20120327-2.9310-A1.7852	1280×960	√	×
	IXE20DN-AAXVUU2	1.8.2-20120327-2.9081-A1.7852	1920×1080	√	×
	IX30DN-ACFZHB3	1.8.2-20120327-2.9080-A1.7852	2048×1536	√	×
SAMSUNG™ (ONVIF compatibility)	SNB-5000P	V2.00_110727	1280×1024	√	√
	SNB-7000P	V1.10_110819	2048×1536	×	√
	SNZ-5200	V1.04_110825	1280×1024	√	√
SANYO®	VCC-HD2300P	2.03-02(110318-00)	1920×1080	×	×
	VCC-HD2500P	2.02-02(110208-00)	1920×1080	×	√
	VCC-HD4600P	2.03-02(110315-00)	1920×1080	×	√
	VCC-HD5400	2.03-06(110315-00)	1920×1080	×	×
SONY® (Only ONVIF is supported)	SNC-CH220	1.50.00	2048×1536	×	×
	SNC-EP580	1.53.00	1920×1080	√	√
	SNC-RH124	1.73.00	1280×720	√	√
Vivotek® (ONVIF compatibility)	IP7121	0202a	720×576	×	√
	IP7133	0203a	640×480	×	×
	FD8134	0107a	1280×800	×	×
	IP8161	0104a	1600×1200	√	√
	IP8331	0102a	640×480	×	×
	IP8332	0105b	1280×800	×	×
	VS8102	0200S	704×576	√	√
ZAVIO	D5110	MG.1.6.03P8	1280×1024	√	×
	F3106	M2.1.6.03P8	1280×1024	√	√
	F3110	M2.1.6.01	1280×720	√	×
	F3206	MG.1.6.02c045	1920×1080	√	√
	F531E	LM.1.6.18P10	640×480	√	√

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